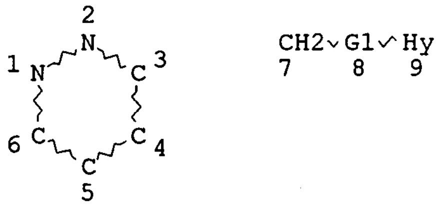
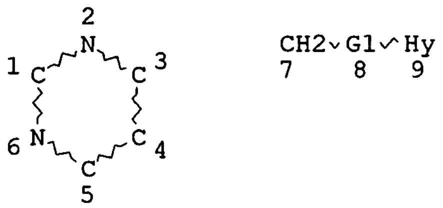
Northington-Davis
10/677218

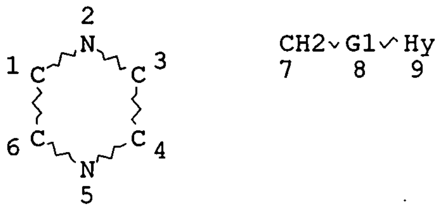
```
FILE 'REGISTRY' ENTERED AT 10:00:04 ON 14 JUN 2005
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2005 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES:    13 JUN 2005  HIGHEST RN 852200-37-4
DICTIONARY FILE UPDATES:   13 JUN 2005  HIGHEST RN 852200-37-4

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

*********************************************************************
*                                                                   *
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added,   *
* effective March 20, 2005.  A new display format, IDERL, is now    *
* available and contains the CA role and document type information. *
*                                                                   *
*********************************************************************

Crossover limits have been increased.  See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

L1                SCR 2040 ← Screen for charge element(s)
L2                STR
```



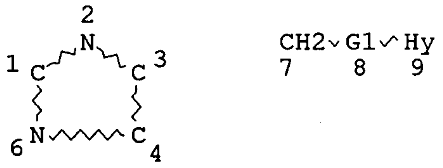
```
REP G1=(0-9) CH2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT    IS MCY  UNS   AT    9
DEFAULT ECLEVEL IS LIMITED
ECOUNT   IS X5 C  M1 N   AT    9

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS    9

STEREO ATTRIBUTES: NONE
L3                STR
```



```
REP G1=(0-9) CH2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS MCY  UNS   AT    9
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS X5 C  M1 N   AT    9

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS    9

STEREO ATTRIBUTES: NONE
L4                STR
```

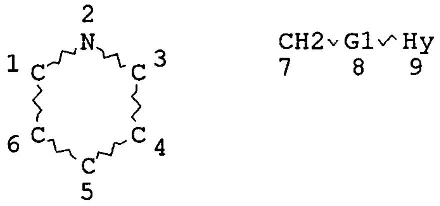


```
REP G1=(0-9) CH2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS MCY  UNS   AT    9
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS X5 C  M1 N   AT    9

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS    9

STEREO ATTRIBUTES: NONE
L5                STR
```

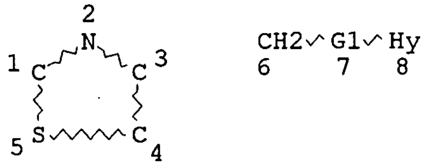


```
REP G1=(0-9) CH2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS MCY  UNS   AT    9
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS X5 C  M1 N   AT    9
```

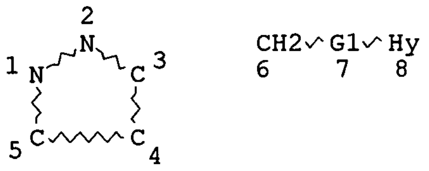
```
GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS   8

STEREO ATTRIBUTES: NONE
L6   (        200)SEA FILE=REGISTRY SSS FUL L2 AND L1
L7   (       7037)SEA FILE=REGISTRY SSS FUL L3 AND L1
L8   (       1701)SEA FILE=REGISTRY SSS FUL L4 AND L1
L9   (      11994)SEA FILE=REGISTRY SSS FUL L5 AND L1
L10        20293 SEA FILE=REGISTRY ABB=ON  PLU=ON  L6 OR L7 OR L8 OR L9
L11              SCR 2040
L12              STR
```



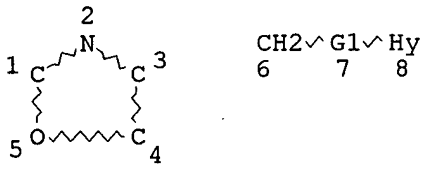
```
REP G1=(0-9) CH2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS MCY  UNS  AT   9
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS X5 C  M1 N  AT   9

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS   9

STEREO ATTRIBUTES: NONE
L13        51091 SEA FILE=REGISTRY SSS FUL L12 AND L11
L14              STR
```



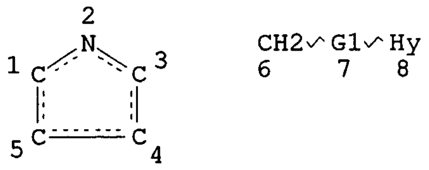
```
REP G1=(0-9) CH2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS MCY  UNS  AT   8
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   8

STEREO ATTRIBUTES: NONE
L15              SCR 2040
L16              STR
```



```
REP G1=(0-9) CH2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS MCY  UNS  AT    8
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS    8

STEREO ATTRIBUTES: NONE
L17              STR
```



```
REP G1=(0-9) CH2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS MCY  UNS  AT    8
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS    8

STEREO ATTRIBUTES: NONE
L18              STR
```



```
REP G1=(0-9) CH2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS MCY  UNS  AT    8
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS    8
```

```
STEREO ATTRIBUTES: NONE
L19       32143 SEA FILE=REGISTRY SSS FUL (L14 OR L16 OR L18 OR L17) AND
                L15
L20             STR

Hy~G1~Hy
 1  2  3


REP G1=(1-10) CH2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS MCY  AT   1
GGCAT   IS MCY  AT   3
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   3

STEREO ATTRIBUTES: NONE
L21        4738 SEA FILE=REGISTRY SUB=L10 SSS FUL L20
L22        7486 SEA FILE=REGISTRY SUB=L13 SSS FUL L20
L23        4204 SEA FILE=REGISTRY SUB=L19 SSS FUL L20
L24        5033 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L21 OR L22 OR L23) AND
                NR=2 ← Compd. w/ only two (2) rings
L25        2722 SEA FILE=REGISTRY ABB=ON  PLU=ON  L24 AND NC=>2      ← At
                                                                      least two (2)
FILE 'CAPLUS' ENTERED AT 10:00:04 ON 14 JUN 2005                      compds.
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)


Copyright of the articles to which records in this database refer is
held by the publishers listed in the PUBLISHER (PB) field (available
for records published or updated in Chemical Abstracts after December
26, 1996), unless otherwise indicated in the original publications.
The CA Lexicon is the copyrighted intellectual property of the
American Chemical Society and is provided to assist you in searching
databases on STN.  Any dissemination, distribution, copying, or storing
of this information, without the prior written consent of CAS, is
strictly prohibited.

FILE COVERS 1907 - 14 Jun 2005  VOL 142 ISS 25
FILE LAST UPDATED: 13 Jun 2005  (20050613/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

  This file contains CAS Registry Numbers for easy and accurate
  substance identification.

L26       26876 S L25
L27          56 S L26(L)(?VIRAL? OR ?VIRUS? OR VIRUCID?)
L28          47 S L27 NOT (PY=>2003 OR PD=>20030613)

E1 THROUGH E27 ASSIGNED

L28  ANSWER 1 OF 47  CAPLUS  COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER:        2004:882389  CAPLUS
```

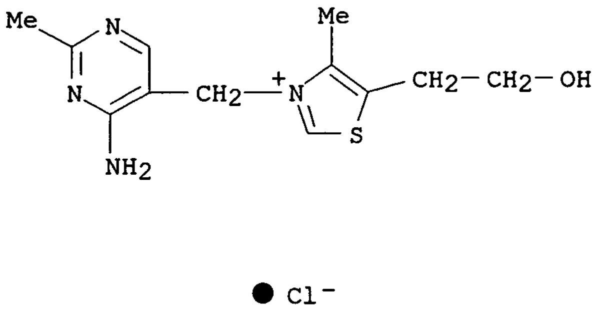
DOCUMENT NUMBER: 142:183257
TITLE: Antiviral agent and anticancer agent containing unsaturated fatty acid extract of Sesamum indicum l. and alkaline extract of potato as active ingredients
INVENTOR(S): Son, Nam Youl
PATENT ASSIGNEE(S): S. Korea
SOURCE: Repub. Korean Kongkae Taeho Kongbo, No pp. given
CODEN: KRXXA7
DOCUMENT TYPE: Patent
LANGUAGE: Korean
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	KR 2001029185	A	20010406	KR 1999-41858	19990929
PRIORITY APPLN. INFO.:				KR 1999-41858	19990929

AB Provided is an antiviral agent which contains unsatd. fatty acid extract of Sesamum indicum L. and alkaline extract of potato as active ingredients, shows inhibiting effects on infection of various viruses such as influenza virus and retrovirus, and on bacteria growth, as well as destroys malignant tumor without any side effect. An antiviral agent, which comprises unsatd. fatty acid extract of sesamum indicum L. and alkaline extract of potato, as effective ingredients, is manufactured by the following steps of: washing sesamum indicum L. and drying it to lose 15% of water; heating it in a microwave followed by press extracting it to obtain unsatd. fatty acid extract thereof; washing potato and followed by press extracting it to obtain alkaline extract thereof; mixing the unsatd. fatty acid extract and the alkaline extract in a mixing ratio of 1:1 wherein, an unsatd. fatty acid component is one of Palmitic acid, 0.4-1.1% of Stearic acid, 0.3-0.6% of Sesamin, 0.3-0.6% of Sesamolin and Sesamol, and an alkaline component is one of 0.04mg of Vitamin B1, 0.04mg of Vitamin B2, 0.4mg of Niacin and 99mg of Vitamin C.

IT **59-43-8**, Vitamin B1, biological studies
RL: NPO (Natural product occurrence); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(**antiviral** and anticancer agent containing unsatd. fatty acid extract of Sesamum indicum and alkaline extract of potato)

RN 59-43-8 CAPLUS
CN Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methyl- chloride (9CI) (CA INDEX NAME)



L28 ANSWER 2 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER:	2004:869335 CAPLUS
DOCUMENT NUMBER:	142:100307
TITLE:	Anti-viral and anti-cancer agents
INVENTOR(S):	Son, Nam Youl
PATENT ASSIGNEE(S):	S. Korea
SOURCE:	Repub. Korean Kongkae Taeho Kongbo, No pp. given CODEN: KRXXA7
DOCUMENT TYPE:	Patent
LANGUAGE:	Korean
FAMILY ACC. NUM. COUNT:	1

PATENT INFORMATION:

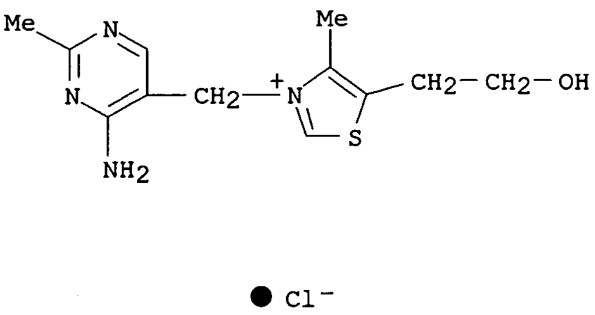
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	KR 2000073414	A	20001205	KR 1999-16677	19990510
PRIORITY APPLN. INFO.:				KR 1999-16677	19990510

AB An anti-viral agent and anti-cancer agent, of which active ingredients are composed of an unsatd. fatty acid of Sesamum indicum L and alkaline exts. of strawberry, are provided. The composition inhibits the infection of retrovirus and its replication, prevents the growth of microorganism, and shows a therapeutic effect on tumor without any side effect. An active ingredient of the anti-viral and anti-cancer agent is prepared by the following steps of: (a) drying the washed Sesamum indicum L for diminishing moisture contents up to 15 %; (b) heating and pressing this to obtain an unsatd. fatty acid; (c) pressing and extracting a washed strawberry; (d) extracting the alkaline exts. therefrom; and (e) mixing the unsatd. fatty acid and the alkaline exts. in a ratio of 1: 1. The unsatd. fatty acid can be palmitic acid, stearic acid, oleic acid, linoleic acid, anti-oxidant component, sesamin of 0.4-1.1 %, sesamolin of 0.3-0.6 % and sesamol. The exts. of the strawberry can be vitamin B1 of 0.04 mg, vitamin B2 of 0.04 mg, niacin of 0.4 mg and vitamin C of 99 mg.

IT **59-43-8**, Vitamin B1, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(anti-**viral** and anti-cancer agents)

RN 59-43-8 CAPLUS

CN Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methyl- chloride (9CI) (CA INDEX NAME)

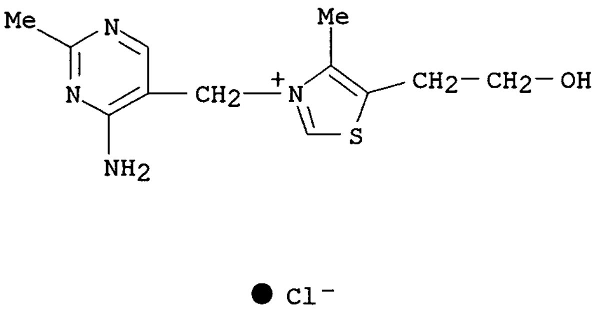


L28 ANSWER 3 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:312835 CAPLUS
DOCUMENT NUMBER: 137:183590
TITLE: Thiamine deficiency in hepatitis C virus and alcohol-related liver diseases
AUTHOR(S): Levy, Stephane; Herve, Christian; Delacoux, Edouard; Erlinger, Serge
CORPORATE SOURCE: Department of Hepatology, INSERM U-481, Clichy, 92118, Fr.
SOURCE: Digestive Diseases and Sciences (2002), 47(3), 543-548
CODEN: DDSCDJ; ISSN: 0163-2116
PUBLISHER: Kluwer Academic/Plenum Publishers
DOCUMENT TYPE: Journal
LANGUAGE: English

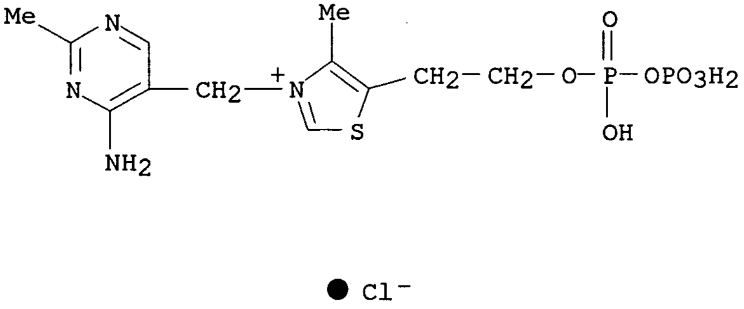
AB Thiamine deficiency is a common feature in chronic alc. patients, and its pathophysiol. remains poorly understood. Until now, thiamine deficiency has been considered to be mainly the result of alcoholism irresp. of the underlying liver disease. The aims of the study were to compare the prevalence of thiamine deficiency in alc.- and hepatitis C virus-(HCV-) related cirrhosis and in patients with chronic hepatitis C without cirrhosis. Forty patients with alc. cirrhosis (group A), 48 patients with HCV-related cirrhosis (group B), and 59 patients with chronic hepatitis C without cirrhosis (group C) were included prospectively. Thiamine status was evaluated by concomitant determination of erythrocyte transketolase activity, thiamine diphosphate (TDP) effect, and direct measurement of erythrocyte thiamine and its phosphate esters by HPLC. Thiamine was mainly present in erythrocytes in its diphosphorylated form. Prevalence of thiamine deficiency and levels of TDP in thiamine-deficient patients were similar in patients of group A (alc. cirrhosis) and of group B (viral C cirrhosis). None of the patients with chronic hepatitis (group C) was deficient. Thiamine deficiency was not correlated with the severity of the liver disease or disease activity. No impairment of thiamine phosphorylation was found in the three groups, conclusion, alc. or HCV-related cirrhotics have the same range of thiamine deficiency, while no patient without cirrhosis has thiamine deficiency, and impaired phosphorylation does not account for the deficiency observed in cirrhotics. We suggest that thiamine should be given to patients with cirrhosis irresp. of its cause.

IT **59-43-8**, Thiamine, biological studies **154-87-0**, Thiamine diphosphate **532-40-1**, Thiamine monophosphate
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(thiamine deficiency in hepatitis C **virus** and

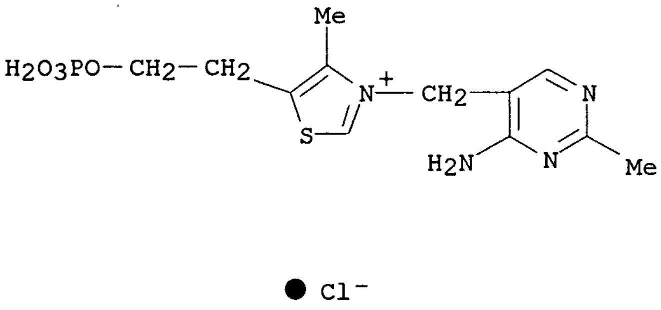
alc.-related liver diseases)
RN 59-43-8 CAPLUS
CN Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methyl- chloride (9CI) (CA INDEX NAME)



RN 154-87-0 CAPLUS
CN Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-4-methyl-5-(4,6,6-trihydroxy-4,6-dioxido-3,5-dioxa-4,6-diphosphahex-1-yl)-, chloride (9CI) (CA INDEX NAME)

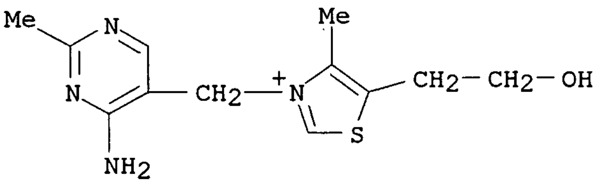


RN 532-40-1 CAPLUS
CN Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-4-methyl-5-[2-(phosphonooxy)ethyl]-, chloride (9CI) (CA INDEX NAME)



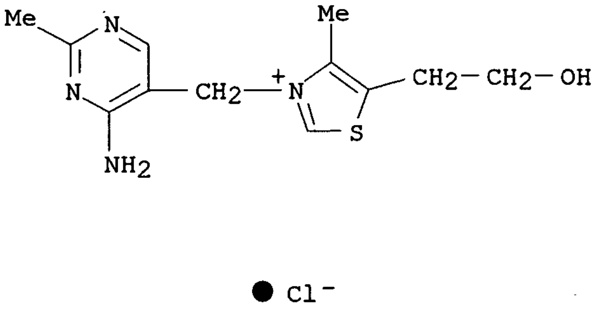
REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
L28  ANSWER 4 OF 47  CAPLUS  COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER:         2000:414608  CAPLUS
DOCUMENT NUMBER:          133:318503
TITLE:                    Potential of vitamins as ultraviolet screens for
                          Spodoptera litura (Lepidoptera: Noctuidae) nuclear
                          polyhedrosis virus
AUTHOR(S):                Baskaran, R. K. Murali; Venugopal, M. S.;
                          Mahadevan, N. R.
CORPORATE SOURCE:         Agricultural College and Research Institute, Tamil
                          Nadu Agricultural University, Madurai, 625 104,
                          India
SOURCE:                   Indian Journal of Agricultural Sciences (2000),
                          70(4), 264-266
                          CODEN: IJASA3; ISSN: 0019-5022
PUBLISHER:                Indian Council of Agricultural Research
DOCUMENT TYPE:            Journal
LANGUAGE:                 English
AB    The tobacco caterpillar, Spodoptera litura (Fabricius) is a
      polyphagous pest attacking 63 plant species belonging to 22 families
      and is reported to have developed resistance to several chemical
      insecticides.  The use of nuclear polyhedrosis virus has been
      advocated under field conditions to control S. litura on different
      crops.  A study was conducted to test the efficiency of vitamins as UV
      protectants for S. litura.  A set of B vitamins along with vitamin C
      and E were tried under laboratory conditions as UV screen for the protection
      of nuclear polyhedrosis virus of S. litura.  Protection of nuclear
      polyhedrosis virus by vitamins was concentration-dependent and an increase
in
      concentration from 0.001 to 1% increased the retention of viral activity
from
      19.7 to 50.4% original activity remaining.  Among 8 vitamins tested,
      riboflavin provided superior protection, multivitamin drops and
      choline chloride provided fair to good protection, and inositol,
      thiamine, vitamin E, vitamin C and p-amino-benzoic acid provided
      little protection.
IT    59-43-8, Thiamine, biological studies
      RL: AGR (Agricultural use); BAC (Biological activity or effector,
      except adverse); BSU (Biological study, unclassified); BIOL
      (Biological study); USES (Uses)
         (potential of vitamins as UV screens for Spodoptera litura nuclear
         polyhedrosis virus)
RN    59-43-8  CAPLUS
CN    Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-
      hydroxyethyl)-4-methyl- chloride (9CI)  (CA INDEX NAME)
```



● Cl^-

```
REFERENCE COUNT:         12    THERE ARE 12 CITED REFERENCES AVAILABLE FOR
                               THIS RECORD. ALL CITATIONS AVAILABLE IN THE
                               RE FORMAT

L28  ANSWER 5 OF 47  CAPLUS  COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER:        1996:370862  CAPLUS
DOCUMENT NUMBER:         125:57030
TITLE:                   Effects of B vitamin injection on bovine
                         herpesvirus-1 infection and immunity in
                         feed-restricted beef calves
AUTHOR(S):               Dubeski, P. L.; d'Offay, J. M.; Owens, F. N.;
                         Gill, D. R.
CORPORATE SOURCE:        Department Animal Science, Oklahoma State
                         University, Stillwater, OK, 74078-0425, USA
SOURCE:                  Journal of Animal Science (1996), 74(6), 1367-1374
                         CODEN: JANSAG; ISSN: 0021-8812
PUBLISHER:               American Society of Animal Science
DOCUMENT TYPE:           Journal
LANGUAGE:                English
AB   Because feed and water deprivation during marketing and transport of
     feedlot calves may reduce ruminal B vitamin synthesis at a time when
     calves are most susceptible to infectious agents, we studied the
     effect of B vitamin injections on infection and immunity in 12
     6-mo-old beef steer calves (153 ± 8 kg) that were weaned,
     limit-fed, and deprived of feed.  Six calves were injected with B
     vitamins and ascorbic acid every 48 h for 28 d starting 2 wk before
     virus inoculation.  All calves were infected with an attenuated strain
     of bovine herpesvirus type 1 (BHV-1) on d 0.  From time of arrival (d
     -20) until the end of a 3-d period without food (d -6), calves lost
     13.1% of their initial weight  However, they regained weight after
     re-feeding so that net weight loss was 7.7% for the 20-d period prior to
     infection.  The stress/BHV-1 model resulted in a mild respiratory
     infection in all calves with no difference observed between treatment
     groups.  Vitamin injections did not significantly affect virus and
     interferon titers in nasal secretions, or lymphocyte blastogenesis.
     However, the B vitamin treatment tended to increase serum IgG titers
     to BHV-1 on bot d 14 (1,120 vs 550, P = .115) and d 28 (2,400 vs
     1,830, P = .37) after infection.  Averaged across d 14 and d 28, IgG
     titers tended to be higher (P < .09) for the calves receiving B
     vitamin injections, indicating that the humoral immune response was
     enhanced by B vitamin treatment.  B vitamin status in stressed calves
     at the time of vaccination or disease challenge may affect the success
     of the immune response.
IT   59-43-8, Thiamin, biological studies
     RL: BAC (Biological activity or effector, except adverse); BSU
     (Biological study, unclassified); BIOL (Biological study)
        (B vitamin injections effect on bovine herpesvirus-1
        infection and immunity in feed-restricted beef calves)
RN   59-43-8  CAPLUS
CN   Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-
     hydroxyethyl)-4-methyl- chloride (9CI)  (CA INDEX NAME)
```

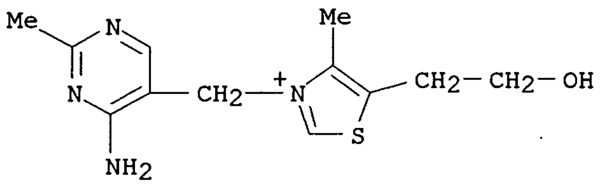


L28 ANSWER 6 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1994:331090 CAPLUS
DOCUMENT NUMBER: 120:331090
TITLE: Antiviral composition prepared by fermentation of milk or whey
INVENTOR(S): Rollan, Serge; Deshayes, Christian
PATENT ASSIGNEE(S): Rochade, Fr.
SOURCE: Fr. Demande, 28 pp.
CODEN: FRXXBL
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2694196	A1	19940204	FR 1992-9601	19920730
FR 2694196	B1	19941021		
PRIORITY APPLN. INFO.:			FR 1992-9601	19920730

AB The title composition is active against oncogenic viruses. It is prepared by double fermentation of milk or whey with a lactic leaven containing Candida pseudotropicalis, Pichia membranaefaciens, Lactococcus, and Lactobacillus. The 1st fermentation is conducted at 26-35°, the 2nd at 18-28°. The antiviral composition contains peptide protease inhibitors of <30,000 Da, an orotic acid salt, and L-lactic acid. The antiviral effect of such a composition on mice infected with mouse mammary tumor virus was demonstrated.

IT **59-43-8,** Thiamine, biological studies
RL: BIOL (Biological study)
(**antiviral** composition prepared by milk or whey fermentation with lactic leaven containing)
RN 59-43-8 CAPLUS
CN Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methyl- chloride (9CI) (CA INDEX NAME)



● Cl^-

L28 ANSWER 7 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1993:121293 CAPLUS

DOCUMENT NUMBER: 118:121293

TITLE: Vitamins in the hemolymph of fifth instar larvae of Bombyx mori

AUTHOR(S): Zang, Rongchun; Ma, Zhichao

CORPORATE SOURCE: Instrum. Cent., Zhejiang Agric. Univ., Hangzhou, 310029, Peop. Rep. China

SOURCE: Kunchong Xuebao (1991), 34(4), 433-7
CODEN: KCHPA2; ISSN: 0454-6296

DOCUMENT TYPE: Journal

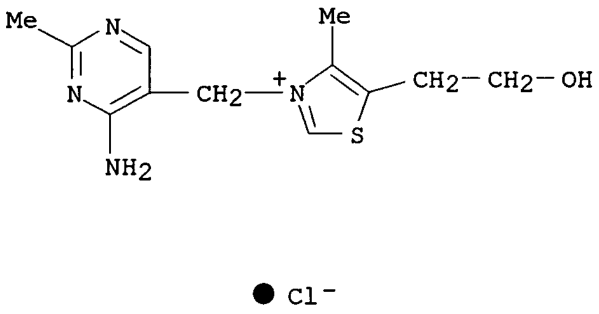
LANGUAGE: Chinese

AB The ion-pair reversed chromatog. method was applied to analyze niacin, niacinamide, pyridoxine (vitamin B6), thiamin (vitamin B1), and riboflavin (vitamin B2) in the hemolymph of the 5th instar larvae of silkworm B. mori. They consisted of 4 groups, including healthy males, cytoplasmic polyhedrosis virus (CPV)-infecred males, healthy females, and F--poisoned females. During the 5th instar larval development, the vitamin content in the hemolymph of the healthy larvae was higher than that in the diseased state, and there was a continuous decrease in vitamin content in the diseased larvae. A part of niacin and niacinamide may be associated with some proteins under enzymic action and form NADP-enzyme during the 5th instar larval development, resulting in the gradual decrease of free niacin and niacinamide. At the same time, the increasing amount of vitamins B6, B1, and B2 is due to the requirement of stored nutrients to complete the life cycle of the silkworm.

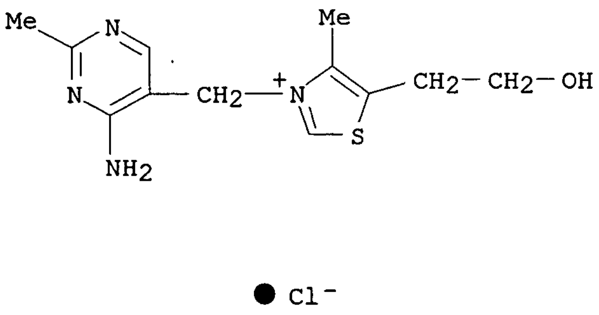
IT **59-43-8**, Thiamin, biological studies
RL: BIOL (Biological study)
(of hemolymph, of silkworm larvae, fluoride poisoning and cytoplasmic polyhedrosis **virus** infection in relation to)

RN 59-43-8 CAPLUS

CN Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methyl- chloride (9CI) (CA INDEX NAME)

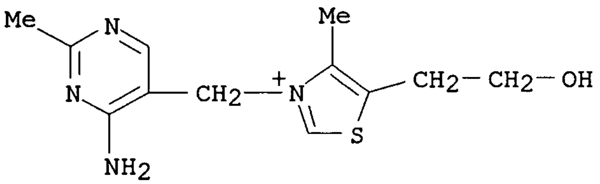


```
L28  ANSWER 8 OF 47  CAPLUS  COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER:        1991:676206  CAPLUS
DOCUMENT NUMBER:         115:276206
TITLE:                    Changes of vitamin content in the blood of
                          silkworm larvae poisoned by fluoride or infected
                          by CPV
AUTHOR(S):                Lu, Shunlin; Xu, Junliang; Xu, Yusong; Zang,
                          Rongchun; Ma, Zhichao
CORPORATE SOURCE:         Dep. Seric., Zhejiang Agric. Univ., Peop. Rep.
                          China
SOURCE:                   Canye Kexue (1990), 16(4), 203-6
                          CODEN: CAKEEM; ISSN: 0257-4799
DOCUMENT TYPE:            Journal
LANGUAGE:                 Chinese
AB   Changes of several water-soluble vitamin (B1, B2, B5, nicotinic acid,
     pyridoxine) contents in the blood of the 5th instar larvae of the
     silkworm (Bombyx mori) which were poisoned by fluoride or infected by
     cytoplasmic polyhedrosis virus (CPV), were determined by HPLC.  The results
     might be helpful to research on fluoride poisoning and CPV infections
     of silkworm.
IT   59-43-8, Vitamin B1, biological studies
     RL: BIOL (Biological study)
        (of blood of silkworm larvae poisoned by fluoride or infected with
        cytoplasmic polyhedrosis virus)
RN   59-43-8  CAPLUS
CN   Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-
     hydroxyethyl)-4-methyl- chloride (9CI)   (CA INDEX NAME)
```



```
L28  ANSWER 9 OF 47  CAPLUS  COPYRIGHT 2005 ACS on STN
```

```
ACCESSION NUMBER:        1990:610545  CAPLUS
DOCUMENT NUMBER:         113:210545
TITLE:                   Micronutrient status and human immunodeficiency
                         virus (HIV) infection
AUTHOR(S):               Bogden, John D.; Baker, Herman; Frank, Oscar;
                         Perez, George; Kemp, Francis; Bruening, Kay;
                         Louria, Donald
CORPORATE SOURCE:        New Jersey Med. Sch., Univ. Med. Dent., Newark,
                         NJ, 07103-2757, USA
SOURCE:                  Annals of the New York Academy of Sciences (1990),
                         587(Micronutr. Immune Funct./Cytokines Metab.),
                         189-95
                         CODEN: ANYAA9; ISSN: 0077-8923
DOCUMENT TYPE:           Journal
LANGUAGE:                English
AB   Humans with HIV infections generally showed ≥1 abnormally low
     level of plasma micronutrients (e.g. minerals, vitamins).  Abnormally
     high levels of some micronutrients were also found, but these were
     attributed to the ingestion of high supplement amts.
IT   59-43-8, Thiamin, biological studies
     RL: BIOL (Biological study)
        (HIV virus infection in humans in relation to nutritional
        status of)
RN   59-43-8  CAPLUS
CN   Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-
     hydroxyethyl)-4-methyl- chloride (9CI)  (CA INDEX NAME)
```



● Cl^-

```
L28  ANSWER 10 OF 47  CAPLUS  COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER:        1990:240516  CAPLUS
DOCUMENT NUMBER:         112:240516
TITLE:                   4,4'-(2-Pyridinylmethylene)bisphenol
                         diacetate-containing pharmaceuticals for herpes
                         simplex treatment
INVENTOR(S):             Kern, Gerald N.; Michaelson, Joseph B.
PATENT ASSIGNEE(S):      Meditech Pharmaceuticals, Inc., USA
SOURCE:                  Can., 11 pp.
                         CODEN: CAXXA4
DOCUMENT TYPE:           Patent
LANGUAGE:                English
FAMILY ACC. NUM. COUNT:  1
PATENT INFORMATION:

     PATENT NO.          KIND   DATE       APPLICATION NO.         DATE
     ---------------     ----   --------   --------------------    --------
```

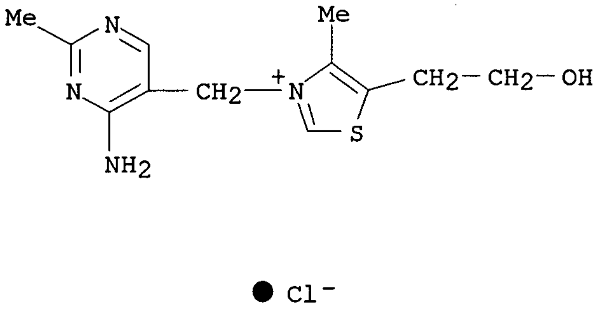
CA 1261269 A1 19890926 CA 1985-473085 19850129
PRIORITY APPLN. INFO.: CA 1985-473085 19850129

AB A composition for administration to mammals to treat Herpes Simplex infections comprises an effective dosage amount as active ingredient of 4,4'-(2-pyridinylmethylene)bisphenol diacetate (I) in association with a pharmaceutically acceptable carrier. The preparation may also contain therapeutic vitamins, amino acids, proteins, and carbohydrates. Tablets or capsules are prepared so that they are sufficient to provide a total dosage of 10-13 mg active ingredient for administration to the patient over a period of 24 h. Thus, tablets were prepared containing I 3.5, lactose 100, starch 1000 and talc 10 mg.

IT **59-43-8**, Vitamin B1, biological studies
RL: BIOL (Biological study)
(pharmaceutical composition containing pyridinylmethylenebisphenol diacetate
and, for herpes simplex **virus** infection)

RN 59-43-8 CAPLUS

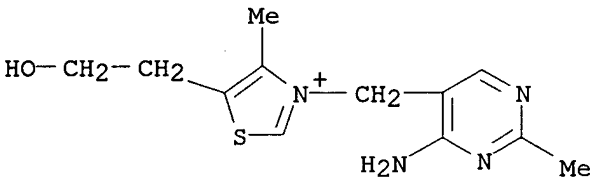
CN Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methyl- chloride (9CI) (CA INDEX NAME)



L28 ANSWER 11 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1989:132314 CAPLUS
DOCUMENT NUMBER: 110:132314
TITLE: Effect of some water soluble vitamins on potato virus Y infectivity. I- effect of thiamin hydrochloride and riboflavin
AUTHOR(S): Ismail, Mahasen H.
CORPORATE SOURCE: Fac. Sci., Cairo Univ., Giza, Egypt
SOURCE: Egyptian Journal of Microbiology (1988), Volume Date 1987, 22(1), 121-8
CODEN: EJMBA2; ISSN: 0301-8172
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The effect of various concns. of either thiamin hydrochloride (vitamin B1) (I) or riboflavin (vitamin B2) (100, 500, 1000, and 2000 ppm) on PVY infectivity was studied both in vitro and in vivo. In vitro, I caused a highly significant reduction in PVY infectivity at 2000 ppm after 1 and 3 h storage periods, and a significant reduction at 1000 ppm after 3 h. In case of riboflavin, however, no significant reduction in PVY infectivity was observed In vivo, a highly significant reduction in PVY infectivity occurred at 2000 ppm of I when rubbed immediately before and after inoculation. No significant reduction was observed in case of riboflavin. Accordingly, I was more effective in reducing PVY infectivity than riboflavin.

IT **67-03-8**, Thiamin hydrochloride
RL: BIOL (Biological study)
(potato **virus** Y infectivity response to)
RN 67-03-8 CAPLUS
CN Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methyl- chloride, monohydrochloride (9CI) (CA INDEX NAME)



● Cl^-

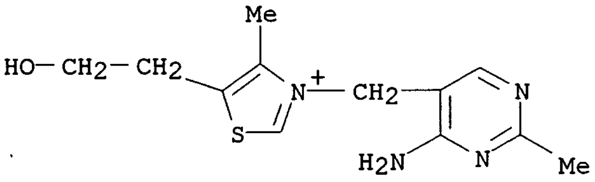
● HCl

L28 ANSWER 12 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1988:17332 CAPLUS
DOCUMENT NUMBER: 108:17332
TITLE: Toxicity testing with animal viruses: I. Vaccinia virus growth as a model system for teratogens
AUTHOR(S): Keller, Stephen J.
CORPORATE SOURCE: Dep. Biol. Sci., Univ. Cincinnati, Cincinnati, OH, 45221, USA
SOURCE: Molecular Toxicology (1987), 1(2-3), 261-76
CODEN: MOTOEX; ISSN: 0883-9492
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A simple, rapid, inexpensive test for teratogens was developed using vaccinia virus growth in primate cell cultures (monkey cell line BSC-40). Eighty-four percent of the test compds. that are known teratogens in laboratory animals, prevented the formation of viable virus at dosages that did not cause any observable cytotoxicity to uninfected cells. The virus test had 1 false pos. and 5 false negatives out of 74 test compds. Moreover, the 50% ID in vitro (RD50) was correlated with the in vivo, lowest reported teratogenic dose (LTD). The RD50 was not correlated with the in vivo LD50. Thus, the virus test appears to be more sensitive to development than to general toxicity. A comparison of the in vitro RD50 with the in vivo, rodent LTD indicated that the two tests were equally predictive of human teratogenesis.

IT **67-03-8**, Thiamine hydrochloride
RL: BIOL (Biological study)
(vaccinia **virus** growth inhibition test in BSC-40 cells in relation to)
RN 67-03-8 CAPLUS

CN Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methyl- chloride, monohydrochloride (9CI) (CA INDEX NAME)



● Cl$^-$

● HCl

L28 ANSWER 13 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1987:570588 CAPLUS
DOCUMENT NUMBER: 107:170588
TITLE: Treatment of plant viruses with thiamin
INVENTOR(S): Bisztray, Gyorgy
PATENT ASSIGNEE(S): Magyar Tudomanyos Akademia, Novenyvedelmi Kutato Intezet, Hung.
SOURCE: Hung. Teljes, 17 pp.
CODEN: HUXXBU
DOCUMENT TYPE: Patent
LANGUAGE: Hungarian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

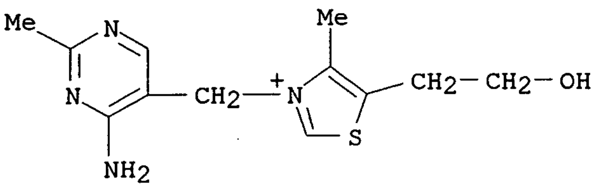
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	HU 41204	A2	19870428	HU 1984-1571	19840424
	HU 193677	B	19871130		
PRIORITY APPLN. INFO.:				HU 1984-1571	19840424

AB Thiamin is a plant virucide. An aqueous solution of thiamin (100 mg/L) controlled the disease induced by the spindle tuber virus in tomato.

IT **59-43-8**, Thiamin, biological studies
RL: BIOL (Biological study)
(plant **virucide**)

RN 59-43-8 CAPLUS

CN Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methyl- chloride (9CI) (CA INDEX NAME)

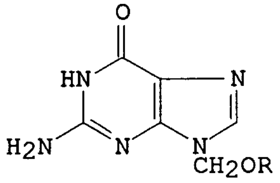


● Cl^-

L28 ANSWER 14 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER:	1987:72799 CAPLUS
DOCUMENT NUMBER:	106:72799
TITLE:	Water-soluble complexes of the antiviral drugs, 9-[1,3-dihydroxy-2-propoxy)methyl]guanine and acyclovir: the role of hydrophobicity in complex formation
AUTHOR(S):	Kenley, Richard A.; Jackson, Stuart E.; Winterle, John S.; Shunko, Yelena; Visor, Gary C.
CORPORATE SOURCE:	Syntex Res., Palo Alto, CA, 94304, USA
SOURCE:	Journal of Pharmaceutical Sciences (1986), 75(7), 648-53 CODEN: JPMSAE; ISSN: 0022-3549
DOCUMENT TYPE:	Journal
LANGUAGE:	English

GI

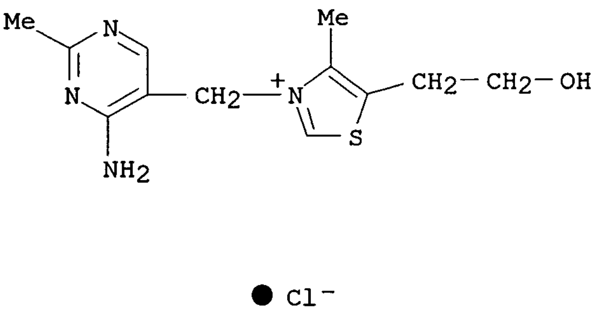


I, $R=CH_2CH_2OH$

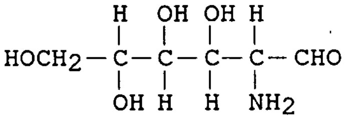
II, $R=CH(CH_2OH)_2$

AB Water-soluble complexes of various ligands with the antiviral drugs, acyclovir (I) and 9-[(1,3-dihydroxy-2-propoxy)methyl]guanine (DHPG) (II) were investigated. For comparison, the parent compds., guanine and guanosine were examined as substrates for complex formation. Using the phase-solubility technique, the formation constant (K1) values were measured at 23° in pH 7 buffer. For a single substrate, formation consts. with different ligands varied in the order: caffeine > pyridoxine .apprx..apprx. cytidine > nicotinamide > sucrose. With caffeine as the ligand, formation consts. with different substrates varied in the order: guanine > guanosine .apprx..apprx. I > II. The largest formation constant observed was 58 M-1 (for guanine-caffeine), and the smallest formation constant was 0.29 M-1 (for II-sucrose). Examining the literature for formation constant data on compds. related to II, and comparing literature data with the exptl. data, reveals a significant correlation between formation consts. and ligand hydrophobicity. For 41 substrate-ligand pairs, least squares linear regression anal. of log K1 values vs. various parameters reflecting donor-acceptor abilities (e.g., substrate and ligand HOMO and LUMO values, or substrate oxidation potentials) failed to significantly correlate. Thus, ligand hydrophobicity is a general determinant of water soluble complex formation, but not necessarily the exclusive or dominant controlling factor for all complexes. Charge-transfer interactions are not important determinants of complex formation for the substrate-ligand combinations that were considered.

IT **59-43-8D**, Thiamine, complexes with guanine **virucides**
RL: BIOL (Biological study)
(formation of water soluble, hydrophobicity)
RN 59-43-8 CAPLUS
CN Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methyl- chloride (9CI) (CA INDEX NAME)



L28 ANSWER 15 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1985:555418 CAPLUS
DOCUMENT NUMBER: 103:155418
TITLE: Effect of coenzyme-A, NAD, alpha-lipoic acid and cocarboxylase on survival of rats with galactosamine-induced severe hepatitis
AUTHOR(S): Thoelen, H.; Zimmerli, W.; Rajacic, Z.
CORPORATE SOURCE: Dep. Innere Med., Dep. Forsch., Basel, CH-4031, Switz.
SOURCE: Experientia (1985), 41(8), 1042-5
CODEN: EXPEAM; ISSN: 0014-4754
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



$$HOCH_2-\underset{OH}{\overset{H}{C}}-\underset{H}{\overset{OH}{C}}-\underset{H}{\overset{OH}{C}}-\underset{NH_2}{\overset{H}{C}}-CHO$$

I

AB Galactosamine (I) [7535-00-4], a selective hepatotoxin, produces in rats histol. alterations, which showed the characteristics of severe human **viral** hepatitis. The efficacy of 2 different cofactor regimens (CoA [85-61-0], NAD [53-84-9], α-lipoic acid [1200-22-2], cocarboxylase [**154-87-0**]) in rats with fulminant galactosamine hepatitis were tested. An improvement of the short-term survival with a short-term treatment and definitely better survival with a long-term regimen with cofactors occurred.

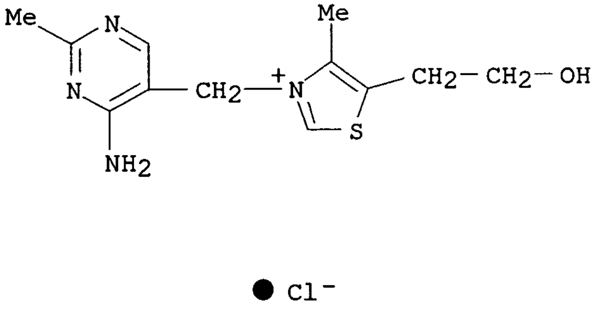
L28 ANSWER 16 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1983:593593 CAPLUS
DOCUMENT NUMBER: 99:193593
TITLE: Effects of B-complex vitamins on cellular and humoral immune functions in vitro and in vivo
AUTHOR(S): Anderson, R.; Theron, A.
CORPORATE SOURCE: Inst. Pathol., Univ. Pretoria, Pretoria, S. Afr.
SOURCE: International Journal for Vitamin and Nutrition Research, Supplement (1983), 24(Vitam. Med.: Recent Ther. Aspects), 77-84
CODEN: IVEBBN; ISSN: 0373-0883
DOCUMENT TYPE: Journal
LANGUAGE: English

AB In vivo studies to assess the effects of a single injection of a vitamin B [12001-76-2] complex preparation on humoral and cellular immune functions in 6 normal adults and 3 adult patients with repeated **viral** infections revealed considerable stimulation of neutrophil motility and lymphocyte mitogen-induced transformation in the group of patients. Stimulation of the same functions was observed in the control group, but was less than that observed with the patients. Of the 4 B vitamins tested in another experiment, only vitamin B1 [**59-43-8**] caused stimulation of neutrophil motility, which was evident both in vitro and in vivo. Vitamin B1 also caused increased lymphocyte responsiveness to mitogens in vivo. Further experimentation revealed that the immunostimulatory activities associated with vitamin B1 were related to the ability of the vitamin to cause inhibition of the peroxidase/H2O/halide system in vivo and in vitro by acting as a scavenger of biol. oxidative-free radicals generated by this system. No changes in the serum levels of Igs and complement components were observed following in vivo administration of the vitamin. Of the other agents tested, only vitamin B6 [8059-24-3] was associated with an increase in mitogen-induced stimulation in vivo. These results indicate that vitamin B1 may be useful in the treatment of conditions associated with decreased neutrophil motility and lymphocyte transformation.

L28 ANSWER 17 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1983:12462 CAPLUS
DOCUMENT NUMBER: 98:12462
TITLE: Animal virus screens for potential teratogens. I. Poxvirus morphogenesis
AUTHOR(S): Keller, Stephen J.; Smith, M. Kate
CORPORATE SOURCE: Dep. Biol. Sci., Univ. Cincinnati, Cincinnati, OH, 45221, USA
SOURCE: Teratogenesis, Carcinogenesis, and Mutagenesis (1982), 2(3-4), 361-74
CODEN: TCMUD8; ISSN: 0270-3211
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The growth of poxvirions in cell culture is considered a teratogen screening test, since this virus has a rapid, simple morphogenetic pathway that is dependent upon cell proliferation. Vaccinia WR-infected BSC 40 monolayers were exposed to 42 known teratogens and 9 nonteratogens at dosages from 1 μM to 100 mM. After 24 h of infection, the number of functional virions was determined by plaque assay. Thirty-three of the 42 teratogens inhibited the virus, 3 teratogens stimulated the virus, and 6 teratogens were false-negatives. Eight of the 9 nonteratogens had no effect on virus proliferation at dosages as high as 600 times the lowest reported teratogenic dosage. The number of new virions could be directly related to the concentration of the teratogen in vitro, thus allowing each compound to be characterized by a median inhibition/stimulation compared to a teratogen-less infected culture (RD50). The RD50 dosage in mg/L was 98% correlated with the lowest reported teratogenic dose in vivo in mg/kg. In sum, vaccinia-infected cells have an easily identifiable endpoint, plaque-forming units, which may be an accurate prognosticator of teratogenesis.

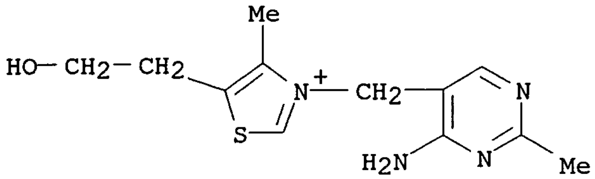
IT **59-43-8**, biological studies
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(teratogenicity of, **poxvirus** in detection of)
RN 59-43-8 CAPLUS
CN Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methyl- chloride (9CI) (CA INDEX NAME)



L28 ANSWER 18 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1981:401734 CAPLUS
DOCUMENT NUMBER: 95:1734
TITLE: Effects of some water soluble vitamins on plant virus infection
AUTHOR(S): Roychoudhury, R.
CORPORATE SOURCE: Dep. Bot., Lucknow Univ., Lucknow, India
SOURCE: Indian Journal of Experimental Biology (1981), 19(5), 492-3
CODEN: IJEBA6; ISSN: 0019-5189
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Thiamine hydrochloride [**67-03-8**], nicotinamide [98-92-0], riboflavin [83-88-5], and folic acid [59-30-3] when applied on test plants 24 h prior to or after **virus** inoculation had varying inhibitory effects on the formation of local lesions by tobacco mosaic **virus** (TMV) in Nicotiana glutinosa and Chenopodium album and by sunnhemp rosette **virus** in Cyamopsis tetragonoloba in treated leaves. Thiamine also reduced TMV infection in untreated parts of N. glutinosa.

IT **67-03-8**
RL: BIOL (Biological study)
(plant **virus** infection response to)
RN 67-03-8 CAPLUS
CN Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methyl- chloride, monohydrochloride (9CI) (CA INDEX NAME)



● Cl^-

● HCl

L28 ANSWER 19 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1980:584707 CAPLUS
DOCUMENT NUMBER: 93:184707
TITLE: Spontaneous and experimental avitaminosis B12 in chickens with blood pictures similar to those in birds erythroleukosis
AUTHOR(S): Begovic, S.; Klancevic, J.; Lubovac, A.; Sacirbegovic, A.
CORPORATE SOURCE: Vet. Fak., Univ. Sarajevu, Yugoslavia
SOURCE: Veterinaria (Sarajevo) (1980), 29(1-2), 180-7
CODEN: VTRNAE; ISSN: 0372-6827
DOCUMENT TYPE: Journal
LANGUAGE: Serbo-Croatian

AB Therapeutic administration of antibiotics in feed reduced intestinal flora and induced B12 avitaminosis in 1-mo-old chickens on farms. Aniso- and poikilocytosis, and anemia occurred, and a number of erythroblasts showed an increased index of staining. Subsequently, the blood picture was studied in chickens fed rice and drinking 0.5-1% tannic acid or 0.5-2% pyrogallol [87-66-1], and prevented from coprophagy. Hyperchromic anemia was provoked, characteristic for avitaminosis B12. Anisocytosis with pronounced macrocytosis and poikilocytosis occurred. Clin. symptoms of beriberi developed. Transfer to conditions permitting coprophagy led to restitution of intestinal coli flora and cured the B12 avitaminosis, leaving only B1 avitaminosis and protein inadequacy. The anemia became normo- or hypochromic. Erythroblastosis was aggravated in proportion to the aggravation of clin. symptoms of beriberi. Drinking tannic acid and pyrogallol prevented curing the B12 avitaminosis by coprophagy, and required administration of vitamin B12 [68-19-9] along with vitamin B1 [**59-43-8**] for successful treatment, whereas without them, the vitamin B1 treatment was adequate. The exptl. erythroleukosis induced with antibiotics gave blood pictures similar to antibiotic-induced erythroleukosis. It is possible that the course of the antibiotic-induced erythroleukosis also is affected by intestinal **virus** increase, following suppression of the coli flora.

L28 ANSWER 20 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1978:22632 CAPLUS

DOCUMENT NUMBER: 88:22632
TITLE: Antimicrobial bis(pyridinium) compounds
INVENTOR(S): Bailey, Denis Mahlon
PATENT ASSIGNEE(S): Sterling Drug Inc., USA
SOURCE: Ger. Offen., 79 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2708331	A1	19770908	DE 1977-2708331	19770225
DE 2708331	C2	19910321		
US 4107313	A	19780815	US 1976-734729	19761022
ZA 7700975	A	19780125	ZA 1977-975	19770218
IL 51520	A1	19801231	IL 1977-51520	19770222
FI 7700593	A	19770826	FI 1977-593	19770223
FI 66850	B	19840831		
FI 66850	C	19841210		
NL 7701965	A	19770829	NL 1977-1965	19770223
NL 186086	B	19900417		
NL 186086	C	19900917		
AU 7722582	A1	19780831	AU 1977-22582	19770223
AU 510149	B2	19800612		
DK 7700812	A	19770826	DK 1977-812	19770224
DK 147638	B	19841029		
DK 147638	C	19850715		
NO 7700631	A	19770826	NO 1977-631	19770224
NO 148779	B	19830905		
NO 148779	C	19831214		
SE 7702072	A	19771010	SE 1977-2072	19770224
SE 432421	B	19840402		
SE 432421	C	19840712		
ES 456252	A1	19780201	ES 1977-456252	19770224
CA 1073911	A1	19800318	CA 1977-272596	19770224
CH 620907	A	19801231	CH 1977-2336	19770224
BE 851807	A1	19770825	BE 1977-1007973	19770225
JP 52105228	A2	19770903	JP 1977-20130	19770225
JP 60033108	B4	19850801		
FR 2342286	A1	19770923	FR 1977-5621	19770225
FR 2342286	B1	19790309		
AT 7701297	A	19790815	AT 1977-1297	19770225
AT 355571	B	19800310		
DK 8203308	A	19820723	DK 1982-3308	19820723
DK 147639	B	19841029		
DK 147639	C	19850812		
NO 8203274	A	19770826	NO 1982-3274	19820928
NO 150758	B	19840903		
NO 150758	C	19841212		
FI 8300855	A	19830315	FI 1983-855	19830315
FI 68394	B	19850531		
FI 68394	C	19850910		

PRIORITY APPLN. INFO.: US 1976-661101 A 19760225

US 1976-661128 A 19760225

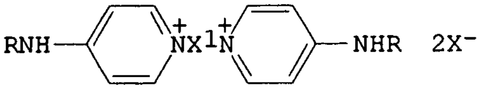
US 1976-721315 A 19760907

US 1976-734729 A 19761022

FI 1977-593 A 19770223

DK 1977-812 A 19770224

GI



I

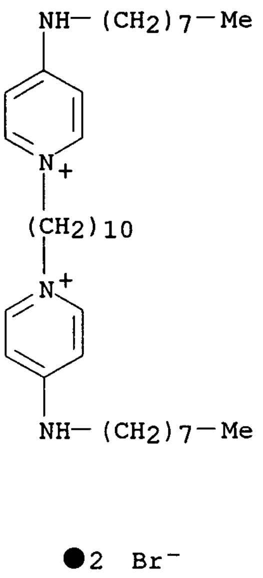
AB Bispyridinium salts I [R = (CH2)nMe, H, cyclohexyl, 4-ClC6H4; X = Cl, Br, F, SO3Me; X1 = (CH2)m, CH2C6H4CH2-p, m = 4-10, 12, 14; n = 2, 5-9, 11] (>80 compds.) were prepared Thus, 4-bromopyridine-HCl was treated with Me(CH2)6NH2.HCl and the 4-heptylaminopyridine treated with Br(CH2)14Br to give I [R = heptyl, X = Br, X1 = (CH2)14]. This compound has min. inhibitory concns. against Staphylococcus aureus Smith 0.77, Escherichia coli Vogel 1.54, and Candida ablicans 10231 1.54 μg/mL and was effective in inhibiting dental plaque formation at 0.1% concentration

Some I were also virucidal (no data).

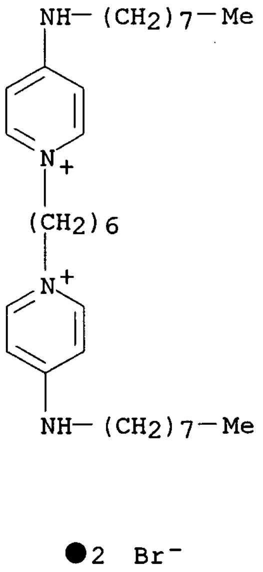
IT **64690-20-6P** **64690-23-9P** **64690-31-9P**
64690-54-6P **64690-55-7P** **64690-56-8P**
64690-57-9P **64690-58-0P** **64691-05-0P**
64691-06-1P **64691-08-3P** **64735-37-1P**
64735-43-9P **64849-50-9P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and bactericidal, fungicidal, and **virucidal** activity of)

RN 64690-20-6 CAPLUS

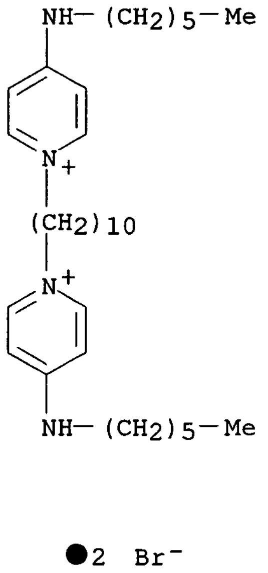
CN Pyridinium, 1,1'-(1,10-decanediyl)bis[4-(octylamino)-, dibromide (9CI) (CA INDEX NAME)



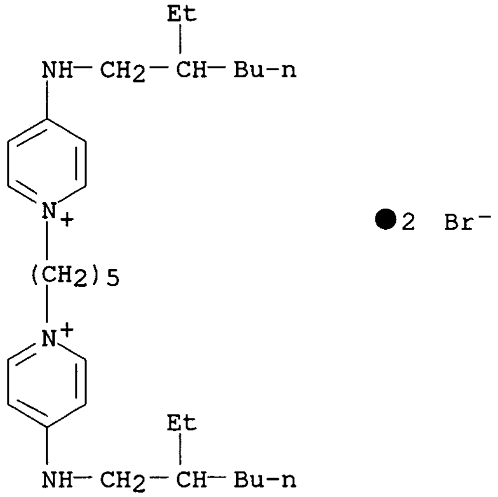
RN 64690-23-9 CAPLUS
CN Pyridinium, 1,1'-(1,6-hexanediyl)bis[4-(octylamino)-, dibromide (9CI) (CA INDEX NAME)



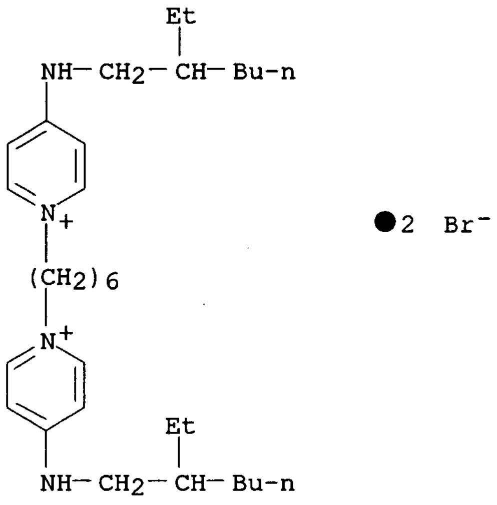
RN 64690-31-9 CAPLUS
CN Pyridinium, 1,1'-(1,10-decanediyl)bis[4-(hexylamino)-, dibromide (9CI) (CA INDEX NAME)



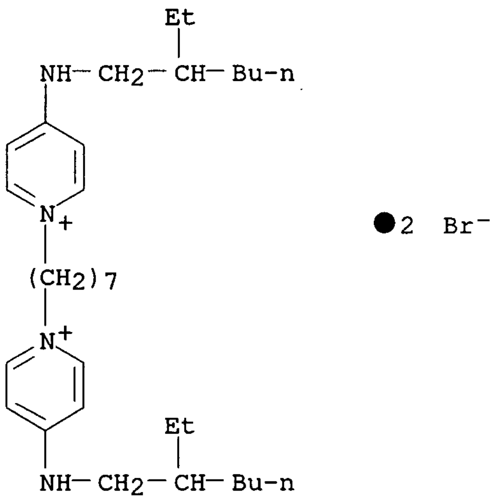
RN 64690-54-6 CAPLUS
CN Pyridinium, 1,1'-(1,5-pentanediyl)bis[4-[(2-ethylhexyl)amino]-, dibromide (9CI) (CA INDEX NAME)



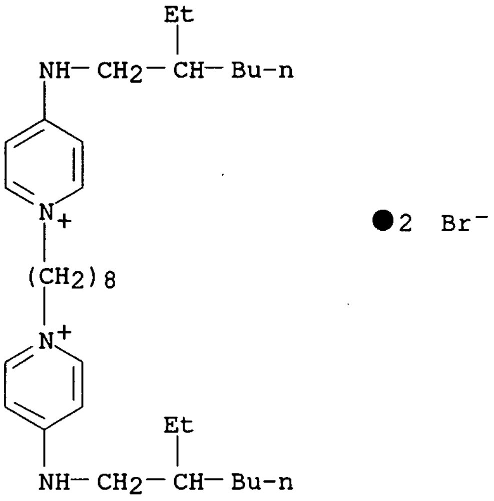
RN 64690-55-7 CAPLUS
CN Pyridinium, 1,1'-(1,6-hexanediyl)bis[4-[(2-ethylhexyl)amino]-, dibromide (9CI) (CA INDEX NAME)



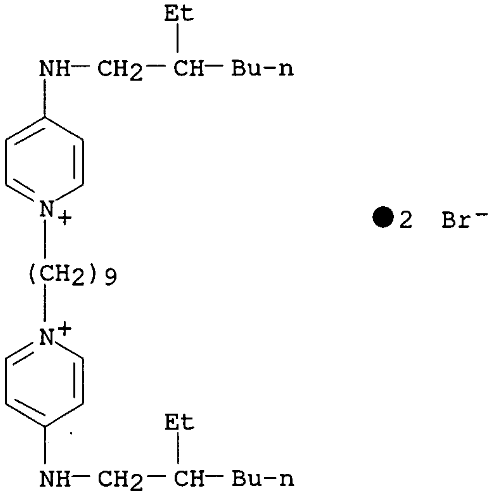
RN 64690-56-8 CAPLUS
CN Pyridinium, 1,1'-(1,7-heptanediyl)bis[4-[(2-ethylhexyl)amino]-, dibromide (9CI) (CA INDEX NAME)



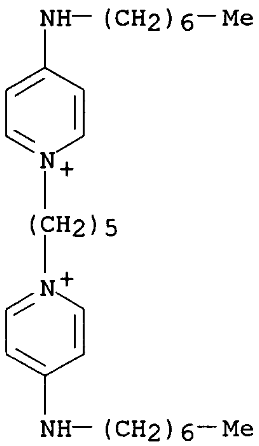
RN 64690-57-9 CAPLUS
CN Pyridinium, 1,1'-(1,8-octanediyl)bis[4-[(2-ethylhexyl)amino]-, dibromide (9CI) (CA INDEX NAME)



RN 64690-58-0 CAPLUS
CN Pyridinium, 1,1'-(1,9-nonanediyl)bis[4-[(2-ethylhexyl)amino]-, dibromide (9CI) (CA INDEX NAME)

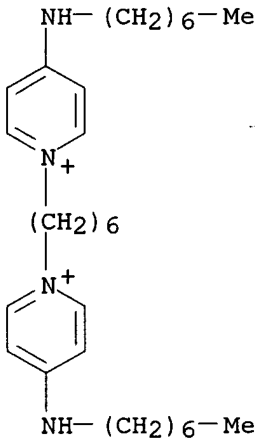


RN 64691-05-0 CAPLUS
CN Pyridinium, 1,1'-(1,5-pentanediyl)bis[4-(heptylamino)-, dibromide (9CI) (CA INDEX NAME)



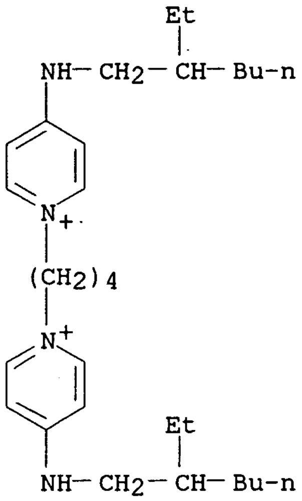
●2 Br^-

RN 64691-06-1 CAPLUS
CN Pyridinium, 1,1'-(1,6-hexanediyl)bis[4-(heptylamino)-, dibromide (9CI) (CA INDEX NAME)



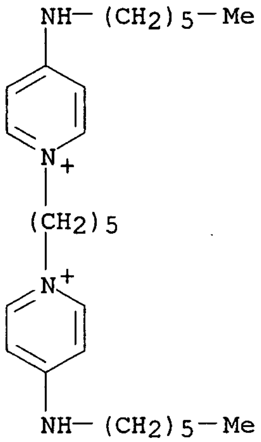
●2 Br^-

RN 64691-08-3 CAPLUS
CN Pyridinium, 1,1'-(1,4-butanediyl)bis[4-[(2-ethylhexyl)amino]-, dibromide (9CI) (CA INDEX NAME)



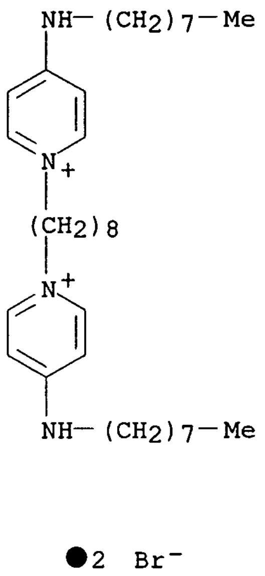
●2 Br⁻

RN 64735-37-1 CAPLUS
CN Pyridinium, 1,1'-(1,5-pentanediyl)bis[4-(hexylamino)-, dibromide (9CI)
(CA INDEX NAME)

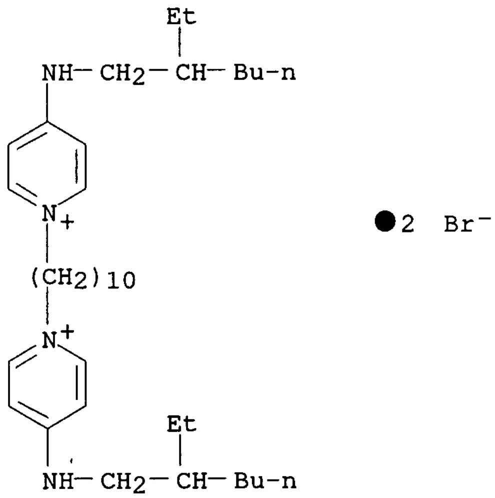


●2 Br⁻

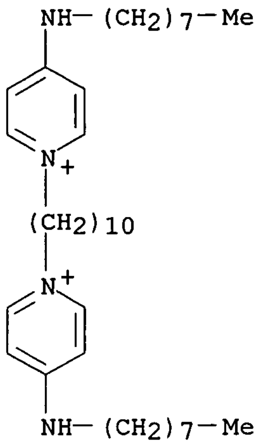
RN 64735-43-9 CAPLUS
CN Pyridinium, 1,1'-(1,8-octanediyl)bis[4-(octylamino)-, dibromide (9CI)
(CA INDEX NAME)



RN 64849-50-9 CAPLUS
CN Pyridinium, 1,1'-(1,10-decanediyl)bis[4-[(2-ethylhexyl)amino]-, dibromide (9CI) (CA INDEX NAME)

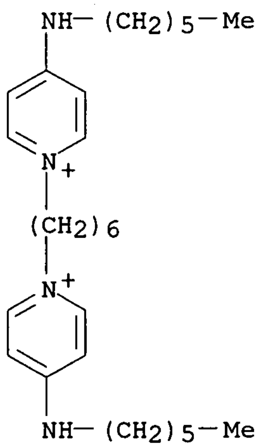


IT **64690-21-7P 64690-86-4P 64690-87-5P**
64690-90-0P 64690-91-1P 64690-93-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and **virucidal**, bactericidal, and fungicidal activity of)
RN 64690-21-7 CAPLUS
CN Pyridinium, 1,1'-(1,10-decanediyl)bis[4-(octylamino)-, dichloride (9CI) (CA INDEX NAME)



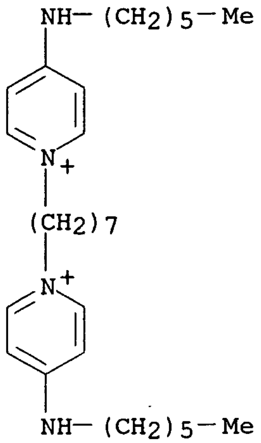
●2 Cl^-

RN 64690-86-4 CAPLUS
CN Pyridinium, 1,1'-(1,6-hexanediyl)bis[4-(hexylamino)-, dibromide (9CI)
(CA INDEX NAME)



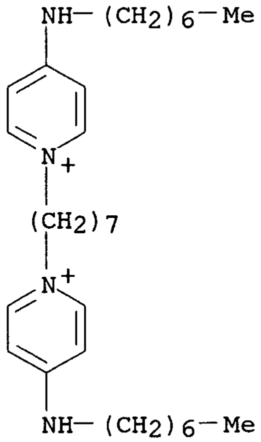
●2 Br^-

RN 64690-87-5 CAPLUS
CN Pyridinium, 1,1'-(1,7-heptanediyl)bis[4-(hexylamino)-, dibromide (9CI)
(CA INDEX NAME)



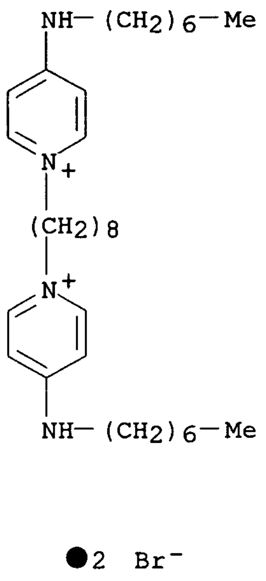
●2 Br^-

RN 64690-90-0 CAPLUS
CN Pyridinium, 1,1'-(1,7-heptanediyl)bis[4-(heptylamino)-, dibromide (9CI) (CA INDEX NAME)

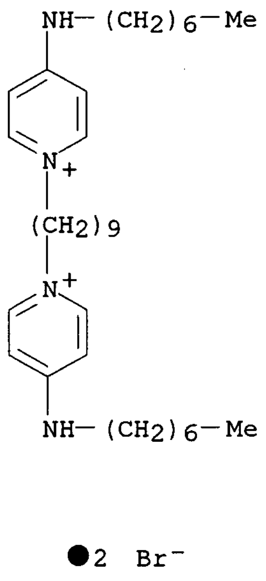


●2 Br^-

RN 64690-91-1 CAPLUS
CN Pyridinium, 1,1'-(1,8-octanediyl)bis[4-(heptylamino)-, dibromide (9CI) (CA INDEX NAME)



RN 64690-93-3 CAPLUS
CN Pyridinium, 1,1'-(1,9-nonanediyl)bis[4-(heptylamino)-, dibromide (9CI)
(CA INDEX NAME)



L28 ANSWER 21 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1977:40316 CAPLUS
DOCUMENT NUMBER: 86:40316
TITLE: Effect of potato leaf-roll virus (PLRV) on the vitamin content in tubers
AUTHOR(S): Torchinskaya, V. M.; Polozhentseva, M. I.
CORPORATE SOURCE: Far East Univ., Vladivostok, USSR
SOURCE: Trudy - Akademiya Nauk SSSR, Dal'nevostochnyi

Nauchnyi Tsentr, Biologo-Pochvennyi Institut
(1974), 21, 71-4
CODEN: TBPIAB

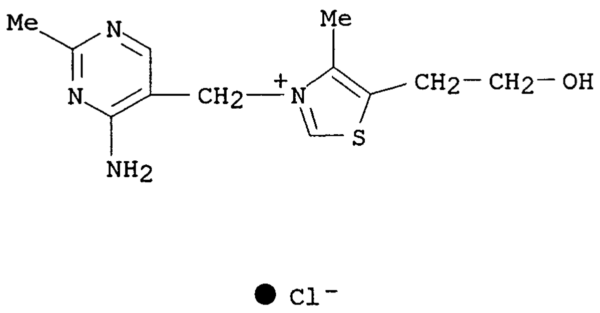
DOCUMENT TYPE: Journal
LANGUAGE: Russian

AB The levels of ascorbic acid, thiamin, and riboflavin were determined in potato tubers from healthy and potato leaf roll virus-infected plants (of 3 different varieties) at various times during the growing period, at the end of vegetation, and after several months storage. The ascorbic acid content of the tubers fluctuated during the growing season and decreased at the end of vegetation but was, throughout this period, higher in the tubers from healthy plants than in those from infected plants. During storage, the ascorbic acid content decreased more rapidly in the tubers from healthy plants than in those from infected plants, such that the ascorbic acid content was similar in both types of tubers by January. The thiamin and riboflavin levels in the tubers increased during the growing period, decreased at the end of vegetation, and decreased further during storage. Throughout this entire period, the tubers from the virus-infected plants contained less thiamin and riboflavin than those from healthy plants. In tubers from healthy plants, the levels of all 3 vitamins were higher in the cortex and apex of the tuber than in the medulla and base at the end of vegetation. In tubers from virus-infected plants, the distribution of thiamin and riboflavin was maintained as above, but that of ascorbic acid was reversed.

IT **59-43-8**, biological studies
RL: BIOL (Biological study)
(of potato tubers, leaf roll **virus** infection effect on)

RN 59-43-8 CAPLUS

CN Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methyl- chloride (9CI) (CA INDEX NAME)



L28 ANSWER 22 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1975:503298 CAPLUS
DOCUMENT NUMBER: 83:103298
TITLE: Composition and method for treating virus infections
INVENTOR(S): Blaszczak, Joseph W.
PATENT ASSIGNEE(S): USA
SOURCE: U.S., 5 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3

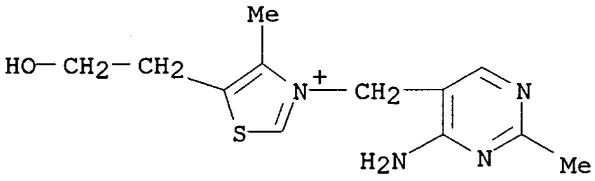
```
PATENT INFORMATION:

     PATENT NO.          KIND   DATE          APPLICATION NO.        DATE
     ---------------     ----   --------      --------------------   --------
     US 3888989           A     19750610      US 1972-279273         19720809
     US 3479335           A     19691118      US 1965-458759         19650525
PRIORITY APPLN. INFO.:                        US 1963-256539      A2 19630206

                                              US 1965-458759      A2 19650525

                                              US 1969-877523      A1 19691117
```

AB Reaction products of ascorbic acid with CH2O or compds. yielding CH2O were effective **virucides** useful in treating **viral** infections in plant and animals. They also impart immunity to such **virus** infections for about 1 year. Vitamins B1 and PP increased the therapeutic effect of the reaction product synergistically. Thus, ascorbic acid 20, lactose 40, thiamine-HCl [**67-03-8**] 1, and nicotinamide [98-92-0] 5 g were mixed with 400 cc 37% CH2O solution and the mixture heated 1 hr. The resultant reaction mixture was diluted with sterile distilled water to 100 cc and 2.5 cc of the composition was used for the treatment of **virus** infections such as influenza.

IT **67-03-8**
RL: BIOL (Biological study)
(in **virucide** prepns. containing ascorbic acid-formaldehyde reaction products)

RN 67-03-8 CAPLUS

CN Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methyl- chloride, monohydrochloride (9CI) (CA INDEX NAME)



● Cl^-

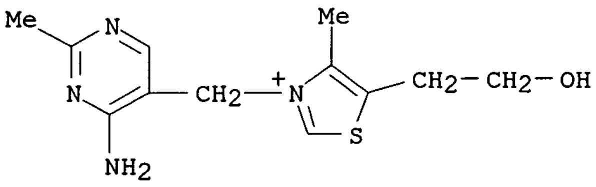
● HCl

L28 ANSWER 23 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1975:149847 CAPLUS
DOCUMENT NUMBER: 82:149847
TITLE: Infection mechanism and inhibition of multiplication in plant virus diseases. I. Screening test for the effect of antibiotics and organic compounds on the multiplication of tobacco mosaic virus

AUTHOR(S): Lle, Jeong Ho; Oh, Jeung Haing; Park, Chan Kirl; Kwon, Shin Han
CORPORATE SOURCE: Appl. Genet. Lab., Korea At. Energy Res. Inst., Seoul, S. Korea
SOURCE: Misaengmul Hakhoechi (1974), 12(2), 53-8
CODEN: MIHCAR; ISSN: 0440-2413
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A screening test for determining the effects of antibiotics, amino acids, pyrimidines, and miscellaneous compds. on tobacco mosaic virus replication was based on floating disks from infected tobacco leaves on solns. of the compds. being tested. Some compds. from each group enhanced virus replication, while others were inhibitory. Both qual. and quant. changes in the effects were influenced by the light intensity and incubation temperature employed. Kanamycin sulfate [3847-27-6], DL-isoleucine [443-79-8], thiouracil [141-90-2], and zinc chloride [7646-85-7] were the most inhibitory substances from the four classes of compds. tested, and glucose-1-phosphate [59-56-3] was the most stimulatory.

IT **59-43-8,** biological studies
RL: BIOL (Biological study)
(tobacco mosaic **virus** multiplication stimulation by)
RN 59-43-8 CAPLUS
CN Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methyl- chloride (9CI) (CA INDEX NAME)



● Cl^-

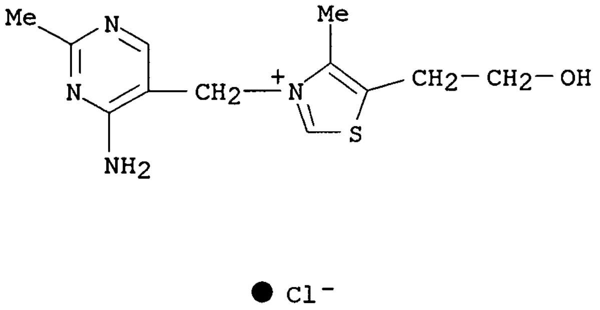
L28 ANSWER 24 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1974:406263 CAPLUS
DOCUMENT NUMBER: 81:6263
TITLE: Increasing poultry vaccine effectiveness by thiamines
INVENTOR(S): Iritani, Yoshikazu; Ohtsuki, Koichi
PATENT ASSIGNEE(S): Shionogi and Co., Ltd.
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 49019019	A2	19740220	JP 1972-59250	19720614
JP 55022449	B4	19800617		

PRIORITY APPLN. INFO.: JP 1972-59250 A 19720614

AB Concomitant or previous oral administration of thiamine or its derivs. increased production of antibodies in domestic fowls innoculated with poultry vaccines. The duration of effectiveness of vaccines was also increased by the thiamine administration. Thus, 3-month old chickens were orally administered O,S-dicarbethoxythiamine (I) daily for 5 days and they were innoculated i.m. with a Newcastle virus-disease vaccine 3 days after the 1st I administration. Serum from the I treated chickens showed .apprx.3-fold higher antibody activity than that of controls.

IT **59-43-8,** Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methyl- chloride
RL: BIOL (Biological study)
(antibody formation from Newcastle disease **virus** vaccine in response to, in chickens)
RN 59-43-8 CAPLUS
CN Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methyl- chloride (9CI) (CA INDEX NAME)

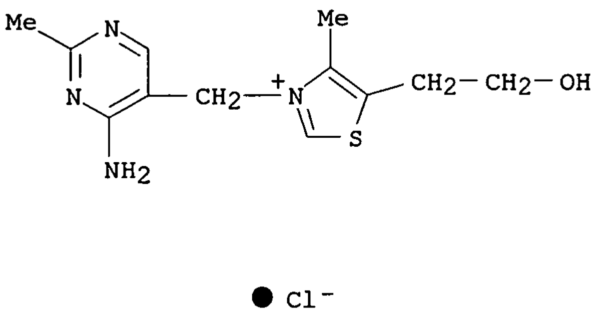


L28 ANSWER 25 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER:	1973:24624 CAPLUS
DOCUMENT NUMBER:	78:24624
TITLE:	Disinfecting plants damaged by viruses
AUTHOR(S):	Abramenko, N. M.
CORPORATE SOURCE:	USSR
SOURCE:	Trudy Moldavskogo Nauchno-Issledovatel'skogo Instituta Sadovodstva, Vinogradarstva i Vinodeliya (1970), 17, 334-7 CODEN: TMSVA6; ISSN: 0450-3317
DOCUMENT TYPE:	Journal
LANGUAGE:	Russian

AB Upper meristems selected from strawberry plants infected with a complex of unidentified **viruses** were best cultivated in Gotre medium, as modified by Morel. This medium is composed of 500 mg Ca(NO3)2.4H2O, 125 mg KNO3, 125 mg MgSO4.7H2O, 125 mg KH2PO4, 30,000 mg glucose [50-99-7], 10 mg cysteine [52-90-4], 0.1 mg thiamine [**59-43-8**], 0.1 mg IAA [87-51-4], and 10,000 mg agar per l.

IT **59-43-8,** biological studies
RL: BIOL (Biological study)
(in strawberry culture media, for **virus** control)
RN 59-43-8 CAPLUS
CN Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methyl- chloride (9CI) (CA INDEX NAME)



L28 ANSWER 26 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1971:554988 CAPLUS
DOCUMENT NUMBER: 75:154988
TITLE: Antiviral reaction products of ascorbic acid and formaldehyde
INVENTOR(S): Blaszczak, Joseph W.
SOURCE: Brit., 6 pp.
CODEN: BRXXAA
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

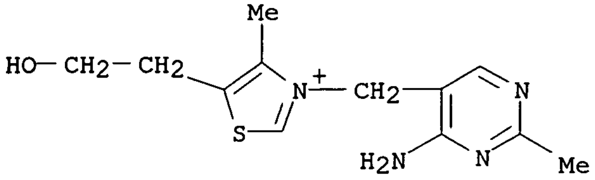
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 1251787		19711027	GB	19700305

AB Antiviral agents useful in the treatment of virus infections of animals, plants, and humans were prepared by heating ascorbic acid in an aqueous solution with HCHO or a compound which yields HCHO. For example, vitamins B and PP were added to a mixture of ascorbic acid 100, paraformaldehyde containing 95% HCHO 200, thiamine-HCl 2, and nicotinic acid amide or nicotinic acid 5 g in 200 ml H2O, and the mixture was heated with evolution of CO2 to give 125 g of a resinous foam (A). A solution of A in 200 ml H2O was fermented at room temperature to produce an orange supernatant liquid (B), of which 1 ml was a curative dose against human influenza and provided immunity against influenza for about 1 year. Fowl pox, infectious laryngotracheitis, infectious bronchitis, Newcastle disease, hog cholera, and canine distemper were also treated successfully with B.

IT **67-03-8**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(**virucides**)

RN 67-03-8 CAPLUS

CN Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methyl- chloride, monohydrochloride (9CI) (CA INDEX NAME)



● Cl$^-$

● HCl

L28 ANSWER 27 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1971:461431 CAPLUS
DOCUMENT NUMBER: 75:61431
TITLE: Effect of thiamine on the formation of interferon and influenza virus V-antigen
AUTHOR(S): Popena, B.
CORPORATE SOURCE: Inst. Mikrobiol. im. Kirhensteina, Riga, USSR
SOURCE: Latvijas PSR Zinatnu Akademijas Vestis (1971), (4), 39-42
CODEN: LZAVAL; ISSN: 0132-6422
DOCUMENT TYPE: Journal
LANGUAGE: Russian

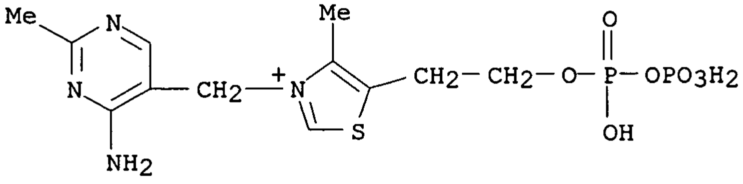
GI For diagram(s), see printed CA Issue.

AB Thiamine pyrophosphate (I) or thiamine HBr (100 µg) introduced into the allantoic cavity of chickens 1 hr before, simultaneously with, or 1 hr after influenza virus infection did not affect the formation of interferon or influenza virus V-antigen.

IT **154-87-0 7019-71-8**
RL: BIOL (Biological study)
(influenza **virus** antigen and interferon formation in presence of)

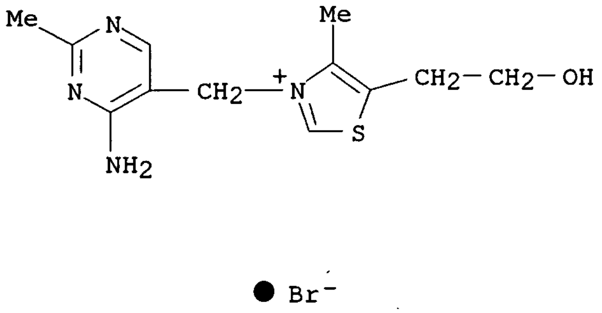
RN 154-87-0 CAPLUS

CN Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-4-methyl-5-(4,6,6-trihydroxy-4,6-dioxido-3,5-dioxa-4,6-diphosphahex-1-yl)-, chloride (9CI) (CA INDEX NAME)



● Cl$^-$

RN 7019-71-8 CAPLUS
CN Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methyl-, bromide (9CI) (CA INDEX NAME)

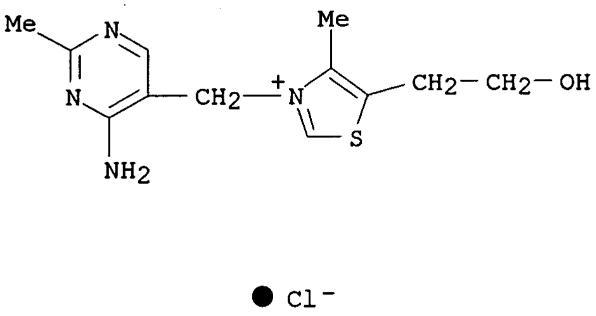


L28 ANSWER 28 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1971:61692 CAPLUS
DOCUMENT NUMBER: 74:61692
TITLE: Effect of some physiologically active substances on tobacco mosiac virus
AUTHOR(S): Bobyr, A. D.; Zhmurko, L. I.
CORPORATE SOURCE: Inst. Mikrobiol. Virusol., USSR
SOURCE: Mikrobiologichnii Zhurnal (1934-1977) (1970), 32(5), 622-8
CODEN: MZUKAV; ISSN: 0026-3664
DOCUMENT TYPE: Journal
LANGUAGE: Russian

AB Among 35 physiol. active substances tested, 12 inhibited tobacco mosaic virus in vitro by 50-78.7% and 5 inhibited it in vivo by 44.5-58.2%. Simazin, atrazine (I), propazine, prometryne, inositol, folic acid, and pyridoxine were the most active in this regard. Eighteen of the compds. stimulated tobacco mosaic virus in vivo and in vitro by 50-122%. The triazines, phenols, and bioses had the highest antiviral activity of the 8 groups of compds. studied, but had no toxic effects on Datura stramonium or Nicotiana glutinosa.

IT **59-43-8**, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(tobacco mosaic **virus** response to)

RN 59-43-8 CAPLUS
CN Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methyl- chloride (9CI) (CA INDEX NAME)



L28 ANSWER 29 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN

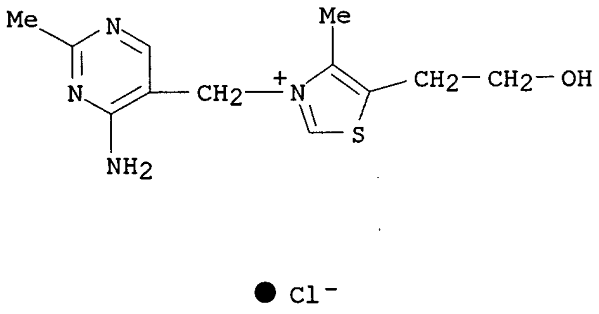
ACCESSION NUMBER: 1970:53085 CAPLUS
DOCUMENT NUMBER: 72:53085
TITLE: Thiamine metabolism in hamsters with experimental sarcoma during the action of oncolytic viruses
AUTHOR(S): Zarins, Z.
CORPORATE SOURCE: Latv. Eksp. Klin. Med. Zinat. Petniecibas Inst., Riga, USSR
SOURCE: Latvijas PSR Zinatnu Akademijas Vestis (1969), (10), 128-31
CODEN: LZAVAL; ISSN: 0132-6422
DOCUMENT TYPE: Journal
LANGUAGE: Latvian

AB During the growth of the tumor, thiamine excretion decreased while pyruvic acid excretion increased. The activity of transketolase increased in the liver and kidneys and was high in tumor tissues, similar to that in the kidney tissues of healthy animals. With regression of the tumor after treatment with the oncolytic virus, ECHO-4, thiamine and pyruvic acid excretion became normal, thus indicating a direct link between thiamine metabolism and tumor growth.

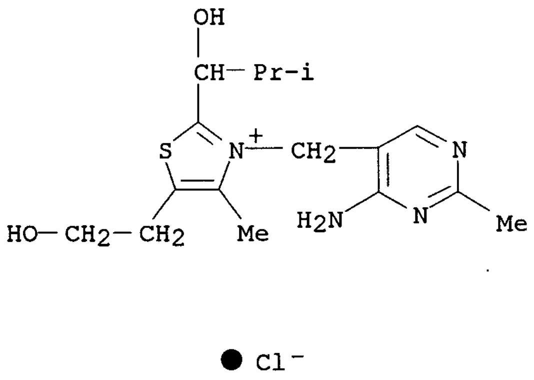
IT **59-43-8**, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(metabolism of, by kidneys and liver, in neoplasia, oncogenic **viruses** effect on)

RN 59-43-8 CAPLUS

CN Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methyl- chloride (9CI) (CA INDEX NAME)



```
L28  ANSWER 30 OF 47  CAPLUS  COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER:         1969:55931  CAPLUS
DOCUMENT NUMBER:          70:55931
TITLE:                    Testing of methisazone preparations
AUTHOR(S):                Hollos, Ivan; Nyerges, Gyorgyi
CORPORATE SOURCE:         Nat. Inst. Public Health, Budapest, Hung.
SOURCE:                   Acta Microbiologica Academiae Scientiarum
                          Hungaricae (1968), 15(3), 213-21
                          CODEN: AMAHA5; ISSN: 0001-6187
DOCUMENT TYPE:            Journal
LANGUAGE:                 English
AB   The metisazone prepns., Marboran and HIBT (not defined), at 40
     micromoles/9 ml. medium added to chick embryo monolayers caused
     detachment of 10-50% of the cells and toxic granulation in 20-50%.
     Inoculation into the pseudo air sac or allantois of embryonated eggs
     with each dilution of a halving series from 40 to 0.156 micromoles caused
     death of all embryos in 72 hrs.; inoculation into the yolk sac
     produced death in most embryos in 48 hrs.  In mice, i.p. injections of
     80 micromoles of the drug caused death in several hrs.  The bright
     yellow urine excreted by mice given 40 micromoles of the drug had no
     antiviral effect when injected into the yolk sac of embryonated eggs
     simultaneously infected with vaccinia virus.  The accuracy of the
     mouse assay was satisfactory but the method is too laborious for
     routine use.  The ratio of the largest nontoxic dose to the smallest
     dose eliciting a well defined antiviral effect was between 1:1 and 4:1
     in the fibroblast monolayers, between 6:1 and 12:1 in the
     chorioallantoic membrane, and about 16:1 in the mouse.  In the case of
     the vaccinia virus, the potency test on chorioallantoic membrane
     appears to be standardizable.
IT   10549-37-8, HIBT
     RL: BAC (Biological activity or effector, except adverse); BSU
     (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (virucidal activity of)
RN   10549-37-8  CAPLUS
CN   Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-
     hydroxyethyl)-2-(1-hydroxy-2-methylpropyl)-4-methyl-, chloride (8CI,
     9CI)  (CA INDEX NAME)
```



```
L28  ANSWER 31 OF 47  CAPLUS  COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER:         1968:442278  CAPLUS
DOCUMENT NUMBER:          69:42278
```

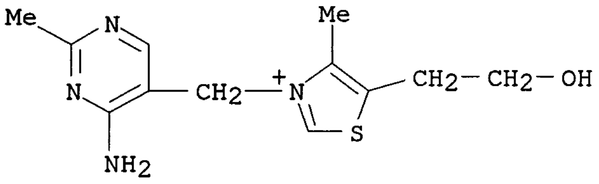
TITLE: Effects of thiamine deprivation of Friend virus leukemia in mice
AUTHOR(S): Judge, John R.
CORPORATE SOURCE: St. Luke's Hosp., Cleveland, OH, USA
SOURCE: Proceedings of the Society for Experimental Biology and Medicine (1968), 128(1), 98-103
CODEN: PSEBAA; ISSN: 0037-9727
DOCUMENT TYPE: Journal
LANGUAGE: English

AB DBA/2 mice infected with Friend leukemia virus and maintained on a thiamine-free diet showed no histol. evidence or clin. manifestations of leukemia compared with counterpart controls maintained on a normal diet. Aliquot groups originally thiamine-deprived and subsequently refed thiamine developed gross splenomegaly and histol. evidence of leukemia.

IT **59-43-8**, biological studies
RL: BIOL (Biological study)
(leukemia from Friend **virus** in deprivation of)

RN 59-43-8 CAPLUS

CN Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methyl- chloride (9CI) (CA INDEX NAME)

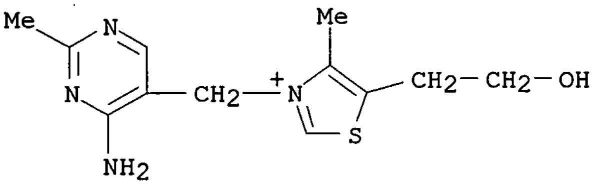


● Cl^{-}

L28 ANSWER 32 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1967:507219 CAPLUS
DOCUMENT NUMBER: 67:107219
TITLE: Some potential antiviral agents
AUTHOR(S): Krishnamurthy, V. N.; Rao, K. V. Nageswara; Rao, P. L. Narasimha; Praphulla, H. B.
CORPORATE SOURCE: Indian Inst. Sci., Bangalore, India
SOURCE: British Journal of Pharmacology and Chemotherapy (1967), 31(1), 1-10
CODEN: BJPCAL; ISSN: 0366-0826
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Representative compds. containing the N-C-S sequence as well as a few natural products and others were screened in eggs for antivaccinia and antiinfluenza activity using a dermal strain of vaccinia virus (Bangalore strain) and influenza virus PR8. The active compds. were further tested for their in vivo activity in rabbits and in mice, resp. The following compds. exhibited antiviral activity in eggs: (a) K benzylaminothiomethanesulfonate (AB-3) and free benzyl isothiocyanate (AB-2); (b) an impure preparation of 5-amino-1,2,3,4-thiatriazole (amine-X, AB-44); (c) isoniazid (AB-41); (d) cyanoacetyl hydrazide (AB-42); and (e) p-aminophenylmethanesulfonamide (AB-10) (slight activity). In addition, 4-cyanoacetyl-1-benzylthiosemicarbazide (AB-45) and 4-amino-2-thiouracil (AB-48) show slight activity. AB-3 and AB-41 displayed antiviral activity on both the viruses. The activity of the latter compound on vaccinia virus is feeble, however, being detectable only in the in vitro system. Both the compds. seem to act best when administered before infection in eggs. AB-44 is specifically active against vaccinia virus in all the three test systems, i.e., in vitro, in eggs, and in vivo. It suppresses lesion formation in rabbits infected intradermally with the virus. The activity of the compds., especially of AB-3, is influenced by the addition of thiamine. The metal-binding compds. screened exhibit little or no detectable antiviral activity in eggs and, therefore, the prospects of evolving new antiviral drugs based on metalchelating hypothesis seem poor. 25 references.

IT **59-43-8**, biological studies
RL: BIOL (Biological study)
(**virus** inhibiting pharmaceuticals and)
RN 59-43-8 CAPLUS
CN Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methyl- chloride (9CI) (CA INDEX NAME)



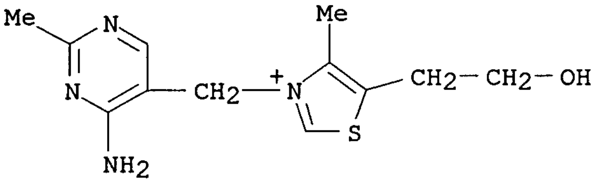
● Cl⁻

L28 ANSWER 33 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1967:441756 CAPLUS
DOCUMENT NUMBER: 67:41756
TITLE: Vitamins during growth and regression of experimental tumor and the effects of oncotropic viruses
AUTHOR(S): Sile, L.
SOURCE: Virusy Onkol. (1966), 333-7
CODEN: 16MGA5
DOCUMENT TYPE: Conference
LANGUAGE: Russian

AB Urine excretion of vitamin B1 (I) in Syrian hamsters after transplantation of human angiosarcoma was reduced by 60%. In animals in which tumor regression was induced by enterovirus ESNO-4, the excretion of I was about 60% of the normal. The course of I excretion in cases of spontaneous regressions was consistent with these results. In these animals the I excretion decreased for 20 days after tumor transplantation and later increased, but did not reach the normal level within 40 days. Excretion of vitamin C was normal in tumor-bearing animals, but it increased by 25% in virus-induced tumor regressions.

IT **59-43-8**, biological studies

RL: BIOL (Biological study)
(in urine, neoplasia and **viruses** in relation to)
RN 59-43-8 CAPLUS
CN Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methyl- chloride (9CI) (CA INDEX NAME)

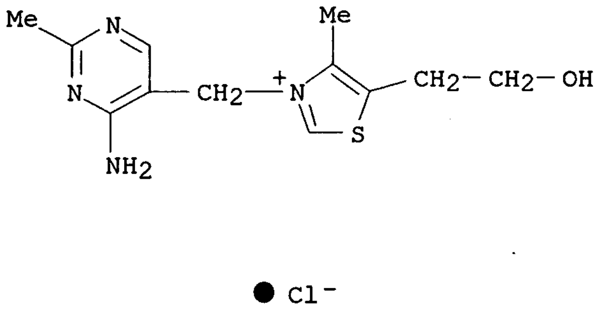


● Cl^-

L28 ANSWER 34 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1965:54270 CAPLUS
DOCUMENT NUMBER: 62:54270
ORIGINAL REFERENCE NO.: 62:9638g-h,9639a
TITLE: Effects of a large amount of thiamine and its derivatives on growth and virus (Poliovirus type I) susceptibility of human amnion cell (JTC-3 cell) in tissue culture
AUTHOR(S): Inaba, Makoto
CORPORATE SOURCE: Univ. Med. School, Okayama, Japan
SOURCE: Bitamin (1964), 30(6), 417-27
CODEN: BTMNA7; ISSN: 0006-386X
DOCUMENT TYPE: Journal
LANGUAGE: Japanese

AB JTC-3 cells were grown in YLE-media containing thiamine and its derivs. such as TPD (thiamine propyl disulfide), TATD [thiamine-8(methyl-6-acetyldihydrothioctate) disulfide] BTMP (benzoylthiamine monophosphate), and CAT (carbalkoxythiamine) at high concns., equivalent to 10 to 50 γ thiamine-HCl/ml. The long-term tissue culture was performed in the case with thiamine and TPD. The effects of these compds. on the cell growth and the susceptibility of the cell to Poliovirus Type I were studied. As a result, it was recognized that TPD and TATD at high concns. (over 20 γ/ml.) had marked inhibitory effects on cell growth, especially the former, but not as marked as BTMP or CAT. On the other hand, thiamine showed no such effect on cell growth, even after long-term cultivation. Viral growth was slightly suppressed by the addition of both TPD and TATD. This suppression might be attributed to the reduced activity of the cells by these compds.

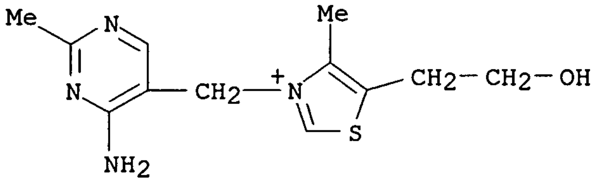
IT **59-43-8**, Thiamine
(cell growth and **virus** susceptibility in relation to)
RN 59-43-8 CAPLUS
CN Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methyl- chloride (9CI) (CA INDEX NAME)



L28 ANSWER 35 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1961:49760 CAPLUS
DOCUMENT NUMBER: 55:49760
ORIGINAL REFERENCE NO.: 55:9624h-i,9625a
TITLE: Latent viral infection of cells in tissue culture. VII. Role of water-soluble vitamins in psittacosis virus propagation in L cells
AUTHOR(S): Bader, John P.; Morgan, Herbert R.
CORPORATE SOURCE: Univ. of Rochester, Rochester, NY
SOURCE: Journal of Experimental Medicine (1961), 113, 271-81
CODEN: JEMEAV; ISSN: 0022-1007
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB cf. CA 54, 11153b. The requirement for various vitamins for the propagation of the virus in mouse fibroblasts (L cells) in vitro was tested in cells depleted of their vitamin content by incubation for 2 days in a balanced salt solution An absolute requirement of thiamine for virus production was found, but maximum production also required pantothenate, niacin (niacinamide), pyridoxine (pyridoxal), and choline. No requirement was found for biotin, inositol, folic acid, or riboflavine; however, the possibility must be considered that the cells were not entirely depleted of these vitamins. In most instances in which a sp. vitamin requirement was shown, the decreased yield of virus was correlated with a delay in the cytopathic effects produced in the cell cultures by psittacosis virus.

IT **59-43-8**, Thiamine
(in psittacosis **virus** propagation)
RN 59-43-8 CAPLUS
CN Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methyl- chloride (9CI) (CA INDEX NAME)



● Cl⁻

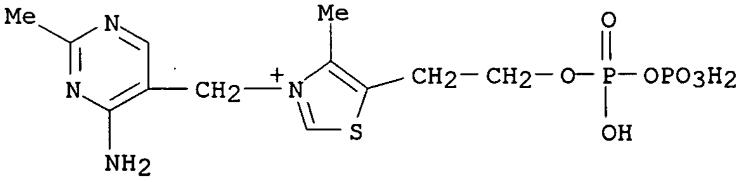
L28 ANSWER 36 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1958:40825 CAPLUS
DOCUMENT NUMBER: 52:40825
ORIGINAL REFERENCE NO.: 52:7372a-b
TITLE: Metabolism of pyruvate and α-ketoglutarate in virus-infected mouse brain
AUTHOR(S): Bradley, P. L.
CORPORATE SOURCE: Wellcome Labs. Trop. Med., London
SOURCE: Nature (London, United Kingdom) (1957), 180, 1418-19
CODEN: NATUAS; ISSN: 0028-0836
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB Virus-infected mouse brain caused a decrease in enzyme activity with pyruvate as substrate. The normal activity was reduced 15-37%, depending on the strain of virus. With α-ketoglutarate as substrate a smaller decrease was observed. Addition of cocarboxylase restored the enzyme activity to nearly normal. The technique could serve as an indicator of cocarboxylase in the system.

IT **154-87-0**, Cocarboxylase
(in brain (**virus**-infected) metabolism)

RN 154-87-0 CAPLUS

CN Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-4-methyl-5-(4,6,6-trihydroxy-4,6-dioxido-3,5-dioxa-4,6-diphosphahex-1-yl)-, chloride (9CI) (CA INDEX NAME)



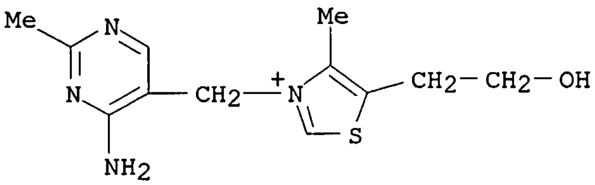
● Cl⁻

L28 ANSWER 37 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1955:24529 CAPLUS
DOCUMENT NUMBER: 49:24529

ORIGINAL REFERENCE NO.: 49:4794c-d
TITLE: Proliferation and preservation of egg-adapted influenza virus
AUTHOR(S): Tani, Tomoji; Hayashi, Tamotsu
CORPORATE SOURCE: Kanazawa Univ.
SOURCE: Japan. J. Med. Sci. and Biol. (1954), 7, 435-43
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB Allantoic fluid of chick embyros was inoculated simultaneously with influenza virus and various vitamins or amino acids. Only vitamin B1 was found to promote the proliferation of the virus significantly. Its maximum effect was with 1.5 mg./egg, and the growth rate was increased by as much as 15 times. A 2% CaCl2 solution added in equal amts. to the allantoic fluid preserved the infective potency of the virus probably because of adsorption of the virus on a Ca salt such as CaHPO4; activated C, and Al silicate have definite preservative properties.

IT **59-43-8**, Vitamin, B1
(in influenza-**virus** preservation)
RN 59-43-8 CAPLUS
CN Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methyl- chloride (9CI) (CA INDEX NAME)

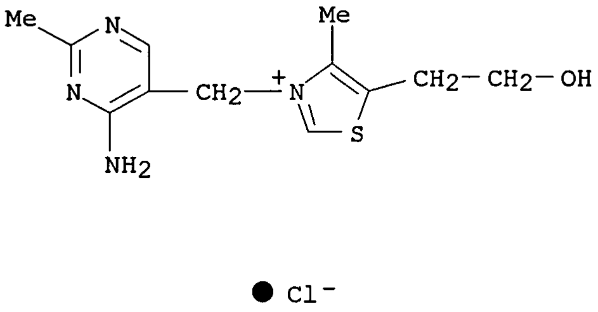


● Cl$^-$

L28 ANSWER 38 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1955:16526 CAPLUS
DOCUMENT NUMBER: 49:16526
ORIGINAL REFERENCE NO.: 49:3307d-f
TITLE: Effect of some metabolites on propagation of tobacco mosaic virus
AUTHOR(S): Ryzhkov, V. L.; Marchenko, N. K.
CORPORATE SOURCE: D. I. Ivanovskii Inst. Virol., Acad. Med. Sci. U.S.S.R., Moscow
SOURCE: Doklady Akademii Nauk SSSR (1954), 98, 1033-6
CODEN: DANKAS; ISSN: 0002-3264
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB Malic acid, Na citrate, fumaric acid, and 1:1 mixture of fumaric and malonic acid aid the propagation of the virus. Succinic acid generally aids its growth also. However, citric acid, malonic acid, and (CO2H)2 (especially) retard its development. In all cases, the materials were applied to the plants after suitable neutralization with KOH. Folic acid and pyridoxine aid the virus development, while nicotinamide, thiamine, the pyrimidine nucleus of thiamine and the thiamine nucleus of thiamine (alone or in combination) significantly

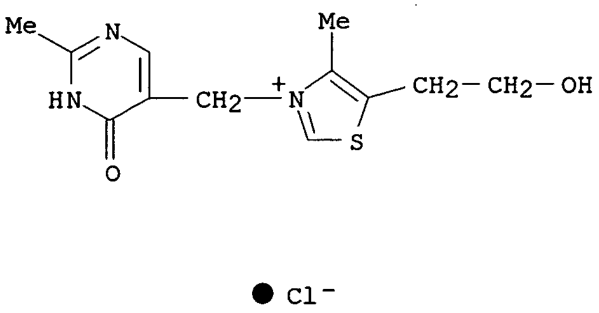
retard the development of the virus.
IT **59-43-8**, Vitamin, B1
(effect on tobacco-mosaic **virus**)
RN 59-43-8 CAPLUS
CN Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methyl- chloride (9CI) (CA INDEX NAME)



L28 ANSWER 39 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1954:72341 CAPLUS
DOCUMENT NUMBER: 48:72341
ORIGINAL REFERENCE NO.: 48:12878c-e
TITLE: Factors related to the growth of psittacosis virus (strain 6BC). IV. Certain amino acids, vitamins, and other substances
AUTHOR(S): Morgan, Herbert R.
CORPORATE SOURCE: Univ. of Rochester, Rochester, NY
SOURCE: Journal of Experimental Medicine (1954), 99, 451-60
CODEN: JEMEAV; ISSN: 0022-1007
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB cf. C.A. 47, 2256i. Psittacosis virus (6BC) (I) was inoculated into cultures of minced chick embryo tissues in nutrient solution of Hanks balanced salts and ox-serum ultrafiltrate to which various compds. were added. Growth of I and the toxicity to the host cell as measured by contractility of chick embryo heart tissue were determined The intracellular multiplication of I was inhibited by β-(2-thienyl)alanine, ethionine, 6-methyltryptophan, and salicyl-β-alanide; toxic effects for host cells did not occur. 6,7-Diethylriboflavine, deoxypyridoxine, and oxythiamine reduced I growth in concns. that possessed some toxicity for host tissue. In tolerated amts., 3-acetylpyridine, 3-pyridinesulfonic acid, pantoylsulfanilamide, and dethiobiotin did not affect I multiplication. CH2(COONa)2 inhibited I growth in nontoxic amts., whereas CH2FCOONa was ineffective. Colchicine suppressed I growth only after a prolonged period of exposure.

IT **582-36-5**, Thiazolium, 5-(2-hydroxyethyl)-3-[(4-hydroxy-2-methyl-5-pyrimidinyl)methyl]-4-methyl-, chloride
(effect on psittacosis **virus**)
RN 582-36-5 CAPLUS
CN Thiazolium, 3-[(1,4-dihydro-2-methyl-4-oxo-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methyl-, chloride (8CI, 9CI) (CA INDEX NAME)



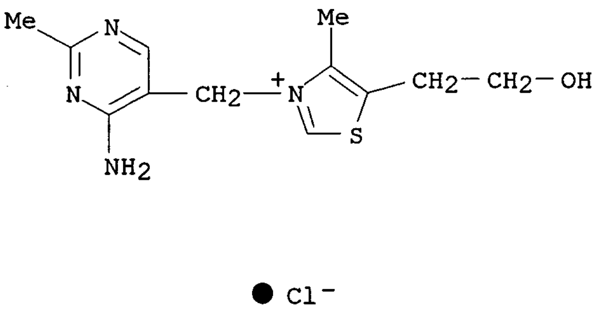
L28 ANSWER 40 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1953:12753 CAPLUS
DOCUMENT NUMBER: 47:12753
ORIGINAL REFERENCE NO.: 47:2277i,2278a
TITLE: Vitamin B1 requirement of Rumex virus tumor tissue
AUTHOR(S): Nickell, Louis G.
CORPORATE SOURCE: Brooklyn Botanical Garden, Brooklyn, NY
SOURCE: Bulletin of the Torrey Botanical Club (1952), 79, 427-30
CODEN: BTBCAL; ISSN: 0040-9618
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB Virus tumor tissue from the root of the sorrel (Rumex acetosa) requires vitamin B1 for growth in vitro and no other vitamin.

IT **59-43-8**, Vitamin, B1
(in nutrition, of **virus** tumor tissue from sorrel root)

RN 59-43-8 CAPLUS

CN Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methyl- chloride (9CI) (CA INDEX NAME)



L28 ANSWER 41 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1952:36265 CAPLUS
DOCUMENT NUMBER: 46:36265
ORIGINAL REFERENCE NO.: 46:6187a-c
TITLE: Effects of some metabolic analogs on growth of mumps and influenza viruses in tissue cultures
AUTHOR(S): Cushing, Richard T.; Morgan, Herbert R.
CORPORATE SOURCE: Univ. of Rochester, Rochester, NY
SOURCE: Proceedings of the Society for Experimental Biology and Medicine (1952), 79, 497-500

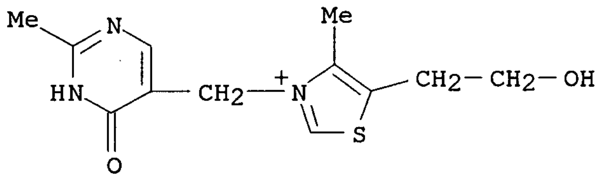
CODEN: PSEBAA; ISSN: 0037-9727
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB The vitamin analogs oxythiamine and desoxypyridoxine inhibit the multiplication of mumps and influenza viruses in chick-embryo-tissue cultures at concns. too low to have a toxic effect on the tissue itself. Other analogs tested, including pyridine-3-sulfonic acid, salicyl-β-alanide, 2,6-diaminopurine, 2-amino-4-hydroxy-6-formylpterin, 8-azaguanine, and β-2-thienylalanine, had no significant inhibitory effects on the viruses.

IT **582-36-5**, Thiazolium, 5-(2-hydroxyethyl)-3-[(4-hydroxy-2-methyl-5-pyrimidinyl)methyl]-4-methyl-, chloride
(effect on **virus** of influenza and mumps)

RN 582-36-5 CAPLUS

CN Thiazolium, 3-[(1,4-dihydro-2-methyl-4-oxo-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methyl-, chloride (8CI, 9CI) (CA INDEX NAME)



● Cl^-

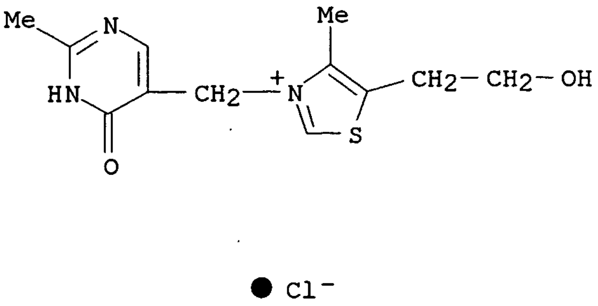
L28 ANSWER 42 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1949:11325 CAPLUS
DOCUMENT NUMBER: 43:11325
ORIGINAL REFERENCE NO.: 43:2293c-d
TITLE: Effect of oxythiamine on infection of mice with the Lansing strain of poliomyelitis virus
AUTHOR(S): Jones, James H.; Foster, Claire; Henle, Werner
SOURCE: Proceedings of the Society for Experimental Biology and Medicine (1948), 69, 454-8
CODEN: PSEBAA; ISSN: 0037-9727
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB cf. C.A. 38, 1548.1; 41, 1735e. The effect of oxythiamine, an inhibitory analog of thiamine, on resistance to the virus was studied. It gave a significant degree of protection, but not quite as marked as that obtained with a low-thiamine diet.

IT **582-36-5**, Thiazolium, 5-(2-hydroxyethyl)-3-[(4-hydroxy-2-methyl-5-pyrimidinyl)methyl]-4-methyl-, chloride
(effect on poliomyelitis **virus** infection)

RN 582-36-5 CAPLUS

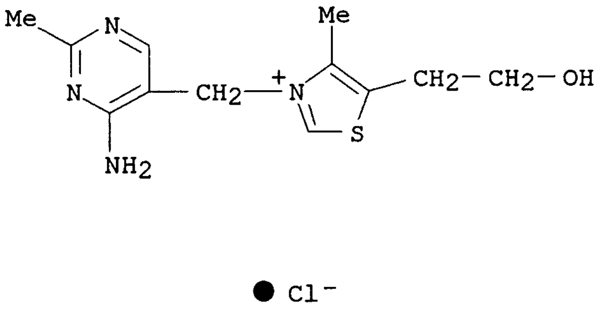
CN Thiazolium, 3-[(1,4-dihydro-2-methyl-4-oxo-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methyl-, chloride (8CI, 9CI) (CA INDEX NAME)



L28 ANSWER 43 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1948:10793 CAPLUS
DOCUMENT NUMBER: 42:10793
ORIGINAL REFERENCE NO.: 42:2359a-c
TITLE: Chemotherapy of virus infections
AUTHOR(S): Cutting, Windsor C.; Dreisbach, Robert H.; Halpern, Richard M.; Irwin, Elizabeth A.; Jenkins, Doris W.; Proescher, Frederick; Tripi, Helen B.
CORPORATE SOURCE: Stanford Univ., San Francisco, CA
SOURCE: Journal of Immunology (1947), 57, 379-90
CODEN: JOIMA3; ISSN: 0022-1767
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB Over 150 compds. were tested as chemotherapeutic agents against vaccinia, influenza, and herpes simplex viruses in chick embryos and mice with mostly neg. results. Deficiency of thiamine or excess of riboflavin appeared to offer protection of slight degree in mice infected with herpes simplex virus. Certain compds., synthetic modifications of nucleic acid derivs., including 3-methylallantoin, 3-ethylallantoin, 1,3-dimethyluracil and Et methylcarbamate, slightly lengthened the lives of chick embryos infected with vaccinia virus. 64 references.

IT **59-43-8**, Vitamin B1
(Avitaminosis or Hypovitaminosis, **virus** infection in)
RN 59-43-8 CAPLUS
CN Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methyl- chloride (9CI) (CA INDEX NAME)

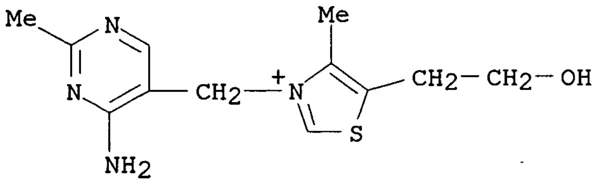


L28 ANSWER 44 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1946:33795 CAPLUS
DOCUMENT NUMBER: 40:33795
ORIGINAL REFERENCE NO.: 40:6570h-i,6571a-b
TITLE: The mechanism of the inhibition of the self-reproduction of tobacco mosaic virus by thiamine
AUTHOR(S): Ryzhkov, V. L.; Smirnova, V. A.; Gorodskaya, O. S.
CORPORATE SOURCE: Acad. Sci., Moscow
SOURCE: Biokhimiya (Moscow) (1946), 11, 197-202
CODEN: BIOHAO; ISSN: 0320-9725
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB cf. C.A. 39, 1666.9. In addition to thiamine, the following substances inhibit the necrotic reaction by the tobacco mosaic virus in the leaves of Nicotiana glutinosa: aniline, hydroxylamine, phenylhydrazine, rivanol, and dinitrophenol. The sulfa drugs, as well as a large number of other substances, fail to inhibit the necrotic reaction. The synthesis of the virus protein is not related to the enzymic oxidative systems. Pyrophosphates and Na_2S, which are inhibitors for enzymes containing heavy metals, do not inhibit the synthesis of the virus protein. The inhibitors do not affect plant respiration, nor do they cause changes in the amts. of carbohydrates and protein N in the tobacco leaves. The inhibitor probably combines with a certain substrate in the cell, with which substrate the virus is also capable of combining. The hypothetical substrate apparently contains an aldehyde group which combines with the amino group found in most inhibitors. In favor of this view is the fact that rivanol, an amine, is a poor inhibitor in the presence of acetone or paraldehyde.

IT **59-43-8**, Vitamin B1
(effect on tobacco mosaic **virus**)
RN 59-43-8 CAPLUS
CN Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methyl- chloride (9CI) (CA INDEX NAME)



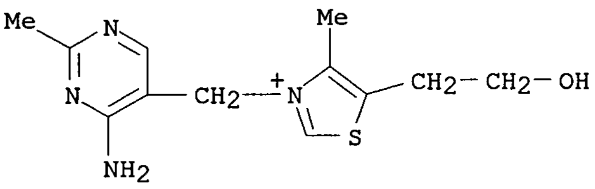
● Cl^-

L28 ANSWER 45 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1945:10653 CAPLUS
DOCUMENT NUMBER: 39:10653
ORIGINAL REFERENCE NO.: 39:1666i,1667a
TITLE: Influence of substances affecting enzymic action on the necrotic reaction produced by Nicotiana virus 1
AUTHOR(S): Ryzhkov, V. L.; Sukhov, K. S.
SOURCE: Biokhimiya (Moscow) (1944), 9, 154-60

CODEN: BIOHAO; ISSN: 0320-9725
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB NaF and CH2ICO2H inhibit certain enzymic reactions but are without effect in arresting the accumulation of tobacco mosaic virus. It follows that these enzymic reactions do not participate in the synthesis of the virus mol. Substances which do inhibit the accumulation of the mosaic virus are cysteine, ascorbic acid and vitamin B1.

IT **59-43-8**, Vitamin B1
(effect on tobacco mosaic **virus**)
RN 59-43-8 CAPLUS
CN Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methyl- chloride (9CI) (CA INDEX NAME)

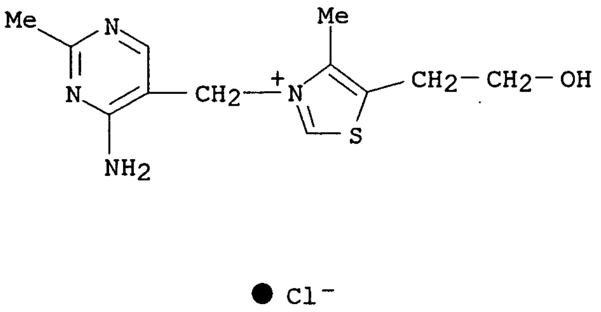


● Cl$^-$

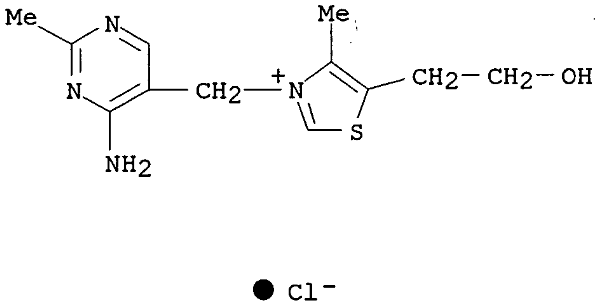
L28 ANSWER 46 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1944:22955 CAPLUS
DOCUMENT NUMBER: 38:22955
ORIGINAL REFERENCE NO.: 38:3325f-g
TITLE: Influence of the level of thiamine intake on the susceptibility of mice to poliomyelitis virus
AUTHOR(S): Rasmussen, A. F., Jr.; Waisman, H. A.; Elvehjem, C. A.; Clark, P. F.
SOURCE: Journal of Infectious Diseases (1944), 74, 41-7
CODEN: JIDIAQ; ISSN: 0022-1899
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB Mice fed diets deficient in thiamine show a lower incidence of infection with Theiler's encephalomyelitis virus and with Lansing strain poliomyelitis virus than do animals fed a similar diet with optimum amts. of thiamine. In some instances, the deficient survivors, when subsequently given adequate thiamine, become paralyzed after a prolonged incubation period. The decrease in susceptibility noted in mice on diets restricted in caloric value but adequate in all vitamins is similar to that observed in thiamine-deficient animals but is less marked.

IT **59-43-8**, Vitamin B1
(effect on susceptibility to poliomyelitis and encephalomyelitis **viruses**)
RN 59-43-8 CAPLUS
CN Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methyl- chloride (9CI) (CA INDEX NAME)



```
L28  ANSWER 47 OF 47  CAPLUS  COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER:          1943:3762  CAPLUS
DOCUMENT NUMBER:           37:3762
ORIGINAL REFERENCE NO.:    37:669h-i
TITLE:                     Response to murine poliomyelitis virus (Lansing
                           strain) of mice on different levels of thiamine
                           intake
AUTHOR(S):                 Foster, Claire; Jones, James H.; Henle, Werner;
                           Dorfman, Frieda
SOURCE:                    Proceedings of the Society for Experimental
                           Biology and Medicine (1942), 51, 215-16
                           CODEN: PSEBAA; ISSN: 0037-9727
DOCUMENT TYPE:             Journal
LANGUAGE:                  Unavailable
AB   The mice were inoculated 34 days after beginning the exptl. diets.
     The mortality was about the same in all the groups but the incidence
     of paralysis was much greater in the high-thiamine group than in the
     thiamine-deficient group.
IT   59-43-8, Vitamin B1
        (effect on poliomyelitis virus)
RN   59-43-8  CAPLUS
CN   Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-
     hydroxyethyl)-4-methyl- chloride (9CI)  (CA INDEX NAME)
```



```
     FILE 'REGISTRY' ENTERED AT 10:02:16 ON 14 JUN 2005
L29          27 SEA FILE=REGISTRY ABB=ON  PLU=ON  (59-43-8/BI OR 67-03-8/BI
                OR 154-87-0/BI OR 582-36-5/BI OR 10549-37-8/BI OR
               532-40-1/BI OR 64690-20-6/BI OR 64690-21-7/BI OR 64690-23-9
               /BI OR 64690-31-9/BI OR 64690-54-6/BI OR 64690-55-7/BI OR
               64690-56-8/BI OR 64690-57-9/BI OR 64690-58-0/BI OR
```

```
                64690-86-4/BI OR 64690-87-5/BI OR 64690-90-0/BI OR
                64690-91-1/BI OR 64690-93-3/BI OR 64691-05-0/BI OR
                64691-06-1/BI OR 64691-08-3/BI OR 64735-37-1/BI OR
                64735-43-9/BI OR 64849-50-9/BI OR 7019-71-8/BI)

FILE 'CAOLD' ENTERED AT 10:02:35 ON 14 JUN 2005
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

FILE COVERS 1907-1966
FILE LAST UPDATED:  01 May 1997 (19970501/UP)

  This file contains CAS Registry Numbers for easy and accurate
  substance identification.  Title keywords, authors, patent
  assignees, and patent information, e.g., patent numbers, are
  now searchable from 1907-1966.  TIFF images of CA abstracts
  printed between 1907-1966 are available in the PAGE
  display formats.

  New CAS Information Use Policies, enter HELP USAGETERMS for details.

  This file supports REG1stRY for direct browsing and searching of
  all substance data from the REGISTRY file.  Enter HELP FIRST for
  more information.

L30         57 L29

L30  ANSWER 1 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN   CA65:19056h  CAOLD
TI   synthesis of vitamin D esters
AU   Fraser, D. R.; Kodicek, E.
TI   water and N content variations in liver and cartilage of rachitic and
     normal rats treated with vitamin D and cocarboxylase
AU   Nannei, A.
IT    154-87-0  13403-07-1  13403-08-2  13403-09-3  13403-10-6

L30  ANSWER 2 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN   CA65:16981b  CAOLD
TI   stable and odorless vitamin B1 prepns.
AU   Nuernberg, Eberhard
DT   Patent
TI   vitamin B1 prepns. (stable and odorless)
PA   Merck, E., A.-G.
DT   Patent
     PATENT NO.    KIND         DATE
     ------------  -----------  ----
PI   DE 1224878
IT     59-43-8    2440-26-8   7286-76-2  10461-01-5

L30  ANSWER 3 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN   CA65:9264c  CAOLD
TI   theory of cocarboxylase action - (II) derivation and proof of a
     double-centrum mechanism of the thiamine pyrophosphate action in model
     expts. and enzymic measurements
AU   Schellenberger, Alfred; Mueller, V.; Winter, K.; Huebner, Gerhard
IT      73-66-5     582-36-5    1446-18-0   4192-39-6  10241-38-0
     10497-04-8  13079-73-7  13079-75-9  13079-76-0  13079-77-1  13079-79-3
     13079-81-7  13079-82-8  13079-85-1  13079-86-2  13079-87-3  96130-86-8
```

```
L30  ANSWER 4 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN   CA65:7876f  CAOLD
TI   treatment of endogenous hepatic coma by coenzyme A, α-lipoic
     acid, diphosphopyridine nucleotide, and cocarboxylase
AU   Thoelen, H.; Colombi, A.; Engelhart, G.
IT     53-84-9     154-87-0     513-85-9

L30  ANSWER 5 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN   CA65:7876d  CAOLD
TI   acute liver atrophy of viral hepatitis treated by coenzyme A,
     α-lipoic acid, diphosphopyridine nucleotide, and cocarboxylase
AU   Caroli, J.; Tholen, H.; Hecht, Y.; Rautureau, M.; Bognel, J. C.;
     Lauga, J.
IT     53-84-9     154-87-0    2203-97-6   2392-39-4   3615-25-6

L30  ANSWER 6 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN   CA65:5738g  CAOLD
TI   studies on 0-acetoglycologyl-S-furoylthiamine - (VI) forms of thiamine
     in tissues and the affinity to some tissues after administration of
     0-acetoglycoloyl-S-furoylthiamine-35S
AU   Minakami, Akihiko; Koike, H.; Kamagata, K.
IT    154-87-0  10072-48-7

L30  ANSWER 7 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN   CA65:4335f  CAOLD
TI   relation of thiamine to the initial reactions of glycolysis
AU   Lukashik, N. K.
IT    136-09-4    495-23-8    582-36-5

L30  ANSWER 8 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN   CA65:2704b  CAOLD
TI   protein metabolism indicators in acute avitaminosis induced one day
     after administering a large dose of oxythiamine
AU   Ostrovskii, Yu. M.; Komarova, B. P.; Karput, S. N.; Nepochelovich, N.
     S.
IT    582-36-5

L30  ANSWER 9 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN   CA64:19320f  CAOLD
TI   paper chromatographic separation and determination of nucleosides of
pharmaceutical
     interest
AU   Amormino, Vito; Cavina, G.
IT     59-43-8

L30  ANSWER 10 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN   CA64:17362e  CAOLD
TI   stabilization of injection solns. containing vitamins and other medicinal
     substances - (I)
AU   Gurevich, I. Ya.; Ogorodnova, O. A.; Zherbina, O. R.; Rozentsveig, P.
     E.
IT     54-85-3     59-46-1     65-23-6     68-19-9    7019-71-8

L30  ANSWER 11 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN   CA64:16258f  CAOLD
TI   Sr extraction from an organism
AU   Odava, I.
```

```
IT     154-87-0  30398-41-5

L30   ANSWER 12 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN    CA64:14042c  CAOLD
TI    stable polyvitamin solns.
AU    Huettenrauch, Reinhard; Klotz, L.
DT    Patent
      PATENT NO.    KIND         DATE
      ------------  -----------  ----
PI    DE 42876
IT     65-23-6      67-03-8      81-13-0     98-92-0    146-17-8

L30   ANSWER 13 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN    CA64:12460g  CAOLD
TI    determination of adenosine triphosphate in the presence of cocarboxylase in
      pharmaceutical products
AU    Polizzi-Sciarrone, Maria
IT     154-87-0

L30   ANSWER 14 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN    CA64:8697d  CAOLD
TI    studies on (hydroxyethyl)thiamine and related compds. - (II) action of
      thiaminase on hydroxyalkylthiamine
AU    Shiobara, Yuichi; Sato, N.; Hattori, R.; Yogi, K.; Murakami, M.
IT    3670-41-5   3671-96-3   3671-97-4   3671-98-5   7021-55-8
      7445-79-6  10549-37-8

L30   ANSWER 15 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN    CA64:8697b  CAOLD
TI    studies on (hydroxyethyl)thiamine and related compds. - (I) vitamin B1
      activity of hydroxyalkylthiamine
AU    Shiobara, Yuichi; Sato, N.; Homma, H.; Hattori, R.; Murakami, M.
IT    3670-41-5   3671-96-3   3671-97-4   3671-98-5   7445-79-6
      10549-37-8

L30   ANSWER 16 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN    CA64:3944g  CAOLD
TI    use of cysteic acid as an internal standard in amino acid analysis
AU    Wainer, Arthur; King, J. S., Jr.
IT     58-61-7      65-46-3      85-30-3     98-92-0    532-40-1

L30   ANSWER 17 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN    CA64:1114h  CAOLD
TI    transport of thiamine by the small intestine
AU    Ventura, U.; Rindi, G.
IT     582-36-5    616-92-2

L30   ANSWER 18 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN    CA63:18111d  CAOLD
TI    pure thiamine phosphoric esters
AU    Leichssenring, Gert; Schmidt, J.
DT    Patent
      PATENT NO.    KIND         DATE
      ------------  -----------  ----
PI    DE 36516
IT     495-24-9     532-40-1     538-60-3   2606-90-8   3269-79-2
      3709-86-2   4066-49-3   4066-51-7   4066-52-8   4066-53-9   4066-55-1
      4394-24-5  10542-07-1  16902-49-1
```

```
L30  ANSWER 19 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN   CA63:1662f  CAOLD
TI   stabilization of ascorbic acid in oral liquid formulations - (I)
     effect of base, (II) effect of pH and metallic ions, (III) effect of
     vitamins
AU   Das, Sudeb; Dutta, B. K.; Dutta, B. N.
IT     67-03-8    81-13-0    532-43-4

L30  ANSWER 20 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN   CA62:12055d  CAOLD
TI   cell fine structure in relation to ferritin synthesis
AU   Richter, Goetz W.
IT     59-43-8   4680-59-5

L30  ANSWER 21 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN   CA62:12055c  CAOLD
TI   thermal transitions of synthetic and biol. polymers in bulk and in
     solution
AU   Mason, Peter; Rigby, B. J.
IT     59-43-8   1948-52-3   1948-58-9

L30  ANSWER 22 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN   CA62:12055b  CAOLD
TI   interaction of thiamine and its related compds. with protein - (IV)
     interaction of thiol type thiamine with oxidized egg albumin and its
     reaction products
AU   Utsumi, Isamu; Harada, K.; Kono, K.; Hirano, H.
TI   interaction of thiamine and its related compds. with protein - (V)
     effect of pH on the reactivity between thiol-type thiamines and
     oxidized egg albumin, (VI) effect of denaturation on the reactivity
     between thiolthiamines and oxidized egg albumin, (VII) reaction of
     allicin-related compds. with proteins
AU   Utsumi, Isamu; Harada, K.; Kono, K.
IT     59-43-8   1948-58-9   2667-89-2

L30  ANSWER 23 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN   CA62:8215f  CAOLD
TI   transport and metabolism of thiamine in rat brain cortex
AU   Sharma, Shail K.; Quastel, J. H.
IT    532-40-1

L30  ANSWER 24 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN   CA62:7851f  CAOLD
TI   synthesis of dinucleotides - (I) synthesis of adenosine and inosine
     diphosphates of thiamine
AU   Kuroda, Toshio; Masaki, M.
IT    532-40-1   3080-35-1   3080-36-2

L30  ANSWER 25 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN   CA62:3086c  CAOLD
TI   bacterial respiratory nitrate reductases
AU   Pichinoty, Francis
IT     59-58-5    137-74-6    154-87-0    299-89-8    495-23-8
     2281-19-8   2281-21-2

L30  ANSWER 26 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN   CA61:16726e  CAOLD
TI   S status of South Carolina crops and soils
AU   Bardsley, Charles E.; Suman, R. F.; Stewart, E. H.
```

```
IT    582-36-5

L30   ANSWER 27 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN    CA61:2171h  CAOLD
TI    simultaneous determination of thiamine, oxythiamine, and their phosphoric
      esters in animal tissues
AU    De Giuseppe, L.; Rindi, G.
IT     582-36-5  10496-64-7  10497-04-8  89642-74-0  96130-86-8

L30   ANSWER 28 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN    CA60:7068b  CAOLD
TI    decomposition of thiamine and its derivs. by ultraviolet irradiation
AU    Okumura, Kengo
IT     582-36-5   1749-72-0

L30   ANSWER 29 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN    CA60:6832h  CAOLD
TI    reaction of thiamine with carbonyl compds.
AU    Miller, Charles Stewart; Sprague, J. M.; Krampitz, L. O.
IT    2933-46-2  10549-37-8  13627-22-0  14707-32-5  88613-27-8
      99005-07-9

L30   ANSWER 30 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN    CA60:4525c  CAOLD
TI    effects of thiamine deficiency and of oxythiamine on rat tissue
      transketolase
AU    Brin, Myron
IT     582-36-5

L30   ANSWER 31 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN    CA60:4520h  CAOLD
TI    antimetabolites in the nutrition of Aedes aegypti larvae-thiamine,
      riboflavine, and pantothenic acid antagonists
AU    Akov, Shoshana; Guggenheim, K.
IT     582-36-5   5735-19-3

L30   ANSWER 32 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN    CA60:4520a  CAOLD
TI    striking difference in the thiamine-sparing action of fat on
      deficiencies produced by oxythiamine and pyrithiamine
AU    Jones, James Hazlitt
IT     582-36-5

L30   ANSWER 33 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN    CA60:2152c  CAOLD
TI    distribution and phosphorylation of oxythiamine in rat tissues
AU    Rindi, Gianguido; De Giuseppe, L.; Ventura, U.
IT     582-36-5  60721-90-6  76780-17-1

L30   ANSWER 34 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN    CA59:8046a  CAOLD
TI    enrichment of pasta and bread
AU    Milatovic, Ljubomir
IT    7019-71-8  35660-16-3  35860-05-0  93046-37-8

L30   ANSWER 35 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN    CA58:8191g  CAOLD
TI    malic dehydrogenase - (V) kinetic studies of substrate inhibition by
      oxalacetate
```

```
AU   Raval, Dilip N.; Wolfe, R. G.
IT    582-36-5

L30  ANSWER 36 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN   CA57:2581d  CAOLD
TI   thiaminase - (XXI) expts. with thiaminase from Bacillus
     aneurinolylicus (7) thiaminase II-inhibition with substrate homologs
AU   Ikehata, Hideo
IT    582-36-5    698-30-6   3581-91-7

L30  ANSWER 37 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN   CA56:10655i  CAOLD
TI   physiol. functions of thiamine - (I) effects of thiamine deficiency
     and thiamine antagonists on the oxidation of α-keto acids by rat
     tissues
AU   Gubler, Clark J.
IT    582-36-5

L30  ANSWER 38 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN   CA56:9204e  CAOLD
TI   chromatography of tuberculoproteins on diethylaminoethyl-cellulose
AU   Rhodes, Joan M.
IT    582-36-5   2545-84-8

L30  ANSWER 39 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN   CA56:4039d  CAOLD
TI   screening of antineoplastic agents with Neurospora crassa
AU   Fuerst, Robert
IT    316-46-1    582-36-5   1004-38-2   2380-63-4   2537-04-4
     5069-66-9   5326-80-7   5334-47-4   5397-10-4   5401-47-8   5401-48-9
     5405-64-1   6284-74-8  23002-56-4  49647-58-7  65591-11-9  91769-01-6
     91978-25-5  92458-14-5  93256-55-4  94713-87-8

L30  ANSWER 40 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN   CA55:26255i  CAOLD
TI   action of thiamine and its analog on neuromuscular transmission
AU   Ngai, S. H.; Ginsburg, S.; Katz, R. L.
IT    582-36-5    930-73-4   1420-40-2  16311-69-6  31766-74-2
     37764-19-5 108992-08-1 109822-08-4

L30  ANSWER 41 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN   CA55:23807f  CAOLD
TI   thiamine and nerve-stimulation research with S35-labeled thiamine and
     thiamine antimetabolites
AU   Gurtner, Hans P.
IT    582-36-5

L30  ANSWER 42 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN   CA55:22614h  CAOLD
TI   etiology of gross malformations
AU   Neuweiler, W.; Richter, R. H. H.
IT     65-31-6    582-36-5   1722-54-9   5984-80-5  30026-27-8

L30  ANSWER 43 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN   CA55:21131d  CAOLD
TI   vitamin B1 and related compds. - (XCIX-CIII) reaction of thiamine (1)
     with ketonic reagents, (2) with NH3, (3) with amines, (4-5) conversion
     of thiamine in strong alkalinity
AU   Masuda, Katsutada
```

IT 92-35-3 305-25-9 2908-73-8 4568-71-2 5781-85-1 5781-86-2
7199-84-0 7407-70-7 7417-38-1 7661-82-7 15890-85-4 18641-53-7
21023-76-7 27284-82-8 49615-45-4 84812-88-4 88615-49-0 89304-93-8
99180-39-9 99988-16-6 100056-62-0 100801-46-5 100859-63-0 100968-18-1
101259-53-4 101779-87-7 102015-25-8 102179-66-8 103155-73-3
103506-40-7 106167-81-1 106522-84-3 108483-53-0 108488-14-8
108631-50-1 108757-96-6 109474-27-3 109504-13-4 109568-21-0
109598-60-9 110436-61-8 111327-48-1 111356-87-7 111977-35-6
112300-36-4 113652-28-1 114330-87-9 114841-95-1 114961-80-7
115247-13-7 116929-69-2 117027-02-8 124108-53-8

L30 ANSWER 44 OF 57 CAOLD COPYRIGHT 2005 ACS on STN
AN CA55:19024g CAOLD
TI action at the cerebral cortex level of some derivs. of thiamine
AU La Grutta, G.; La Grutta, V.
IT **582-36-5** 2257-52-5

L30 ANSWER 45 OF 57 CAOLD COPYRIGHT 2005 ACS on STN
AN CA55:17830g CAOLD
TI circulatory responses to a CO2 buffer following lethal injections of endotoxin
AU Hinshaw, Lerner B.; Vick, J. A.; Nelson, D. L.; Wittmers, L. E.; Swenson, O. P.
IT **582-36-5**

L30 ANSWER 46 OF 57 CAOLD COPYRIGHT 2005 ACS on STN
AN CA55:12411h CAOLD
TI preparation of vitamin B1
AU Tursin, V. M.; Chebotareva, L. G.; Belousova, L. N.; Kolotilova, N. D.
IT 532-43-4 **7019-71-8** 23676-63-3 108631-51-2

L30 ANSWER 47 OF 57 CAOLD COPYRIGHT 2005 ACS on STN
AN CA55:10457i CAOLD
TI action of cyanogen bromide on thiamine - (III-IV) synthesis of 2-methyl-6-(1-methyl-2-thiocyanato-4-hydroxy-1-butenyl)-5,6-dihydropyrimido-[4,5-d]pyrimidine (neocyanothiamine)
AU Kasahara, Shizuka
IT 92-35-3 497-85-8 **582-36-5** 2353-46-0 2421-50-3
13079-75-9 13471-78-8 79990-47-9 84825-03-6 85196-67-4 108754-63-8
109044-67-9 110490-14-7 120745-11-1

L30 ANSWER 48 OF 57 CAOLD COPYRIGHT 2005 ACS on STN
AN CA54:21306i CAOLD
TI determination of thiamine and its decomposition products with Phycomyces - (I)
determination of thiamine, (II) determination of thiamine-decomposition products
AU Hosoda, Shiro
IT 137-00-8 **582-36-5** 698-30-6 2908-73-8 132778-94-0

L30 ANSWER 49 OF 57 CAOLD COPYRIGHT 2005 ACS on STN
AN CA54:21269b CAOLD
TI action of thiamine antagonists on enzymes involved in thiamine metabolism
AU Koedam, J. C.; Steyn-Parve, E. P.
IT **582-36-5** 60721-90-6 76780-17-1

L30 ANSWER 50 OF 57 CAOLD COPYRIGHT 2005 ACS on STN
AN CA54:17533f CAOLD

```
TI   accumulation of amino acids during the inhibition of growth of Vibrio
     comma of different antivitamins
AU   Chatterjee, G. C.; Halder, D. K.
IT    582-36-5   2545-84-8  30026-27-8

L30  ANSWER 51 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN   CA54:15682i  CAOLD
TI   antimetabolites and fetal development
AU   Richter, R. H. H.
IT     61-67-6    582-36-5   1722-54-9   5984-80-5

L30  ANSWER 52 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN   CA54:4817h  CAOLD
TI   uptake of thiamine and its derivs. by human erythrocytes, erythrocyte
     stroma, and yeast cells
AU   Kuroki, Tetsuko
IT    299-89-8    582-36-5   1454-19-9   1948-58-9   3419-28-1
     15592-64-0  19030-80-9  21878-09-1  26145-51-7  59077-66-6 101276-07-7
     101886-23-1 102551-42-8 102760-31-6 103032-39-9 103508-81-2
     109589-43-7 132468-29-2

L30  ANSWER 53 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN   CA53:21985h  CAOLD
TI   oxidation and reduction products of thiamine - (II) thiamine
     disulfide-thioglycolic acid reactions
AU   Bonvicino, Guido E.; Hennessy, D. J.
IT    137-00-8    582-36-5   2400-77-3   3059-71-0   5985-20-6
     83329-13-9 106167-43-5 109498-31-9 110459-20-6

L30  ANSWER 54 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN   CA52:13115e  CAOLD
TI   effect of antimetabolites on embryonic development
AU   Gottlieb, Jacques S.; Frohman, C. E.; Havlena, J. M.
IT    582-36-5

L30  ANSWER 55 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN   CA51:7331e  CAOLD
TI   preparation of thiamine salts
AU   Okumura, Kengo; Sakurai, Y.
IT   4435-26-1   7019-71-8   7640-47-3  20461-54-5  56127-94-7
     78812-25-6  94293-56-8  97046-21-4 109599-52-2 113062-22-9 117026-52-5
     120266-29-7 120335-27-5 120335-28-6 121708-23-4 121708-24-5
     121708-25-6 121708-26-7 122446-96-2 123103-62-8 123965-06-0
     124111-10-0

L30  ANSWER 56 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN   CA51:6854e  CAOLD
TI   action of thiamine antimetabolites on the single medullated nerve
     fiber
AU   Kunz, H. A.
IT    582-36-5

L30  ANSWER 57 OF 57  CAOLD  COPYRIGHT 2005 ACS on STN
AN   CA51:5363b  CAOLD
TI   thiamine - (I) concentrated injectable solns.
AU   Pleticha, Roman
IT    582-36-5  13079-75-9  53731-90-1 116131-57-8

FILE 'USPATFULL' ENTERED AT 10:02:49 ON 14 JUN 2005
```

```
CA INDEXING COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 14 Jun 2005 (20050614/PD)
FILE LAST UPDATED: 14 Jun 2005 (20050614/ED)
HIGHEST GRANTED PATENT NUMBER: US6907616
HIGHEST APPLICATION PUBLICATION NUMBER: US2005125869
CA INDEXING IS CURRENT THROUGH 14 Jun 2005 (20050614/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 14 Jun 2005 (20050614/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Apr 2005
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Apr 2005

>>>  USPAT2 is now available.  USPATFULL contains full text of the     <<<
>>>  original, i.e., the earliest published granted patents or         <<<
>>>  applications.  USPAT2 contains full text of the latest US         <<<
>>>  publications, starting in 2001, for the inventions covered in     <<<
>>>  USPATFULL.  A USPATFULL record contains not only the original     <<<
>>>  published document but also a list of any subsequent              <<<
>>>  publications.  The publication number, patent kind code, and      <<<
>>>  publication date for all the US publications for an invention     <<<
>>>  are displayed in the PI (Patent Information) field of USPATFULL   <<<
>>>  records and may be searched in standard search fields, e.g., /PN, <<<
>>>  /PK, etc.                                                         <<<

>>>  USPATFULL and USPAT2 can be accessed and searched together        <<<
>>>  through the new cluster USPATALL.  Type FILE USPATALL to          <<<
>>>  enter this cluster.                                               <<<
>>>                                                                    <<<
>>>  Use USPATALL when searching terms such as patent assignees,       <<<
>>>  classifications, or claims, that may potentially change from      <<<
>>>  the earliest to the latest publication.                           <<<

This file contains CAS Registry Numbers for easy and accurate
substance identification.

L31          858 S L29
L32            0 S L31(L)(?VIRAL? OR ?VIRUS? OR VIRUCID?)

FILE 'MEDLINE' ENTERED AT 10:03:56 ON 14 JUN 2005

FILE 'BIOSIS' ENTERED AT 10:03:56 ON 14 JUN 2005
Copyright (c) 2005 The Thomson Corporation

FILE 'EMBASE' ENTERED AT 10:03:56 ON 14 JUN 2005
COPYRIGHT (C) 2005 Elsevier Inc. All rights reserved.

L33        25495 L30


L34            0 L33(L)(?VIRUS? OR ?VIRAL? OR VIRUCID?)
```

CODEN: ACSCEE; ISSN: 0108-2701
PUBLISHER: Munksgaard International Publishers Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB In the title compound, 3-[(3,4-dihydro-2-methyl-4-oxopyrimidin-5-yl)methyl]-5-(2-hydroxyethyl)-4-methylthiazolium hexafluorophosphate monohydrate, C12H16N3O2S+·PF6-·H 2O, oxythiamine is a monovalent cation with a neutral oxopyrimidine ring. The mol. assumes the F conformation, which is a common form for thiamine but which is substantially different from the unusual V conformation found in the chloride and hydrochloride salts of oxythiamine. The anion-bridging interaction, C-H...anion...pyrimidine, is emphasized as being important for stabilization of the F conformation. Crystallog. data are given.

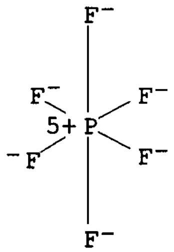
IT **303142-73-6**
RL: PRP (Properties)
(crystal structure of)
RN 303142-73-6 CAPLUS
CN Thiazolium, 3-[(1,4-dihydro-2-methyl-4-oxo-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methyl-, hexafluorophosphate(1-), monohydrate (9CI) (CA INDEX NAME)

CM 1

CRN 303142-72-5
CMF C12 H16 N3 O2 S . F6 P

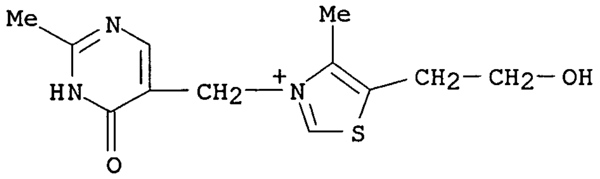
CM 2

CRN 16919-18-9
CMF F6 P
CCI CCS



CM 3

CRN 136-16-3
CMF C12 H16 N3 O2 S



REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L38 ANSWER 16 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1997:322415 CAPLUS
DOCUMENT NUMBER: 127:50253
TITLE: Highly strong complexation of carboxylates with 1-alkylpyridinium receptors in polar solvents
AUTHOR(S): Jeong, Kyu-Sung; Cho, Young Lag
CORPORATE SOURCE: Dep. Chem., Yonsei Univ., Seoul, 120-749, S. Korea
SOURCE: Tetrahedron Letters (1997), 38(18), 3279-3282
CODEN: TELEAY; ISSN: 0040-4039
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Mono- and bispyridinium salts are shown to bind strongly with carboxylates in polar media through multiple hydrogen bonds and addnl. electrostatic interactions. The association consts. of monopyridinium salt with various benzoates are in the range of 110-430 M-1 in DMSO-d6 depending on substituents, while those between bispyridinium salts are adipates are > 103 M-1 in 10% D2O/DMSO-d6.

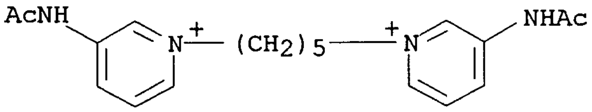
IT **191097-41-3**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(association consts. of monopyridinium and bispyridinium salts with various benzoates)

RN 191097-41-3 CAPLUS

CN Pyridinium, 1,1'-(1,5-pentanediyl)bis[3-(acetylamino)-, bis[hexafluorophosphate(1-)] (9CI) (CA INDEX NAME)

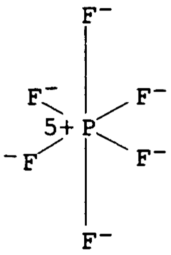
CM 1

CRN 191097-40-2
CMF C19 H26 N4 O2



CM 2

CRN 16919-18-9
CMF F6 P
CCI CCS



REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L38 ANSWER 17 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER:	1995:883697 CAPLUS
DOCUMENT NUMBER:	124:116583
TITLE:	Strong binding of paraquat and polymeric paraquat derivatives by basket-shaped hosts
AUTHOR(S):	Schenning, Albertus P. H. J.; de Bruin, Bas; Rowan, Alan E.; Kooijman, Huub; Spek, Anthony L.; Nolte, Roeland J. M.
CORPORATE SOURCE:	Dep. Org. Chem., Univ. Nijmegen, Nijmegen, NL-6525 ED, Neth.
SOURCE:	Angewandte Chemie, International Edition in English (1995), 34(19), 2132-4 CODEN: ACIEAY; ISSN: 0570-0833
PUBLISHER:	VCH
DOCUMENT TYPE:	Journal
LANGUAGE:	English
OTHER SOURCE(S):	CASREACT 124:116583

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Clip shaped hosts I (R = Ph, MeC6H4) strongly bind paraquat [as Cl- or PF6- (IV) salts]. Spectra, electrochem., and viscosity studies also show that I can clip the polymeric paraquat analogs II (m = 5,8) and III. The crystal structure of I (R = MeC6H4).IV.2CHCl3 is discussed.

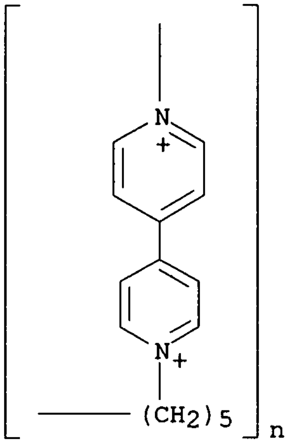
IT **172789-91-2 172789-92-3**
RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)
(strong binding of paraquat and polymeric paraquat derivs. by basket-shaped hosts)

RN 172789-91-2 CAPLUS

CN Poly[[4,4'-bipyridinium]-1,1'-diyl-1,5-pentanediyl bis[hexafluorophosphate(1-)]] (9CI) (CA INDEX NAME)

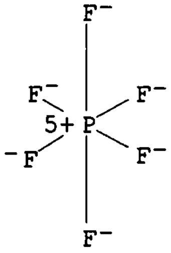
CM 1

CRN 69860-16-8
CMF (C15 H18 N2)n
CCI PMS



CM 2

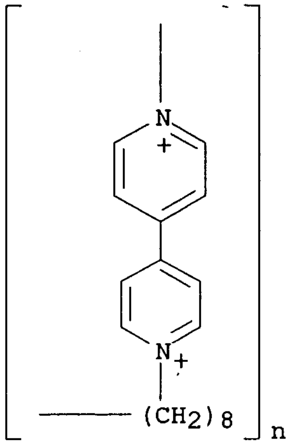
CRN 16919-18-9
CMF F6 P
CCI CCS



RN 172789-92-3 CAPLUS
CN Poly[[4,4'-bipyridinium]-1,1'-diyl-1,8-octanediyl bis[hexafluorophosphate(1-)]] (9CI) (CA INDEX NAME)

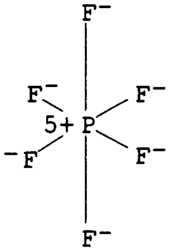
CM 1

CRN 47230-83-1
CMF (C18 H24 N2)n
CCI PMS



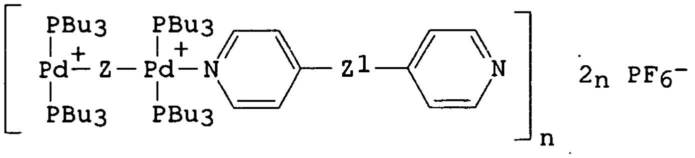
CM 2

CRN 16919-18-9
CMF F6 P
CCI CCS



L38 ANSWER 18 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1989:515535 CAPLUS
DOCUMENT NUMBER: 111:115535
TITLE: Synthesis and characterization of a new class of organopolynuclear complexes containing cationic palladium atoms
AUTHOR(S): Onitsuka, Kiyotaka; Ogawa, Hiroo; Joh, Takashi; Takahashi, Shigetoshi
CORPORATE SOURCE: Inst. Sci. Ind. Res., Osaka Univ., Ibaraki, 567, Japan
SOURCE: Chemistry Letters (1988), (11), 1855-6
CODEN: CMLTAG; ISSN: 0366-7022
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 111:115535
GI



I

AB Reaction of bipyridyl derivs. with (Bu3P)2PdClZPdCl(PBu3)2 [Z = C.tplbond.CC.tplbond.C, 4-C.tplbond.CC6H4C.tplbond.C, 1,4-(C.tplbond.C)2C6H2Me2-2,5] affords 5 cationic organopalladium complexes I (same Z, Z1 = -, CH2CH2, CH:CH). Concentrated CH2Cl2 solns. of some of I form nematic liquid crystals indicating that the polynuclear complexes have an extended linear structure.

IT **122395-85-1P**

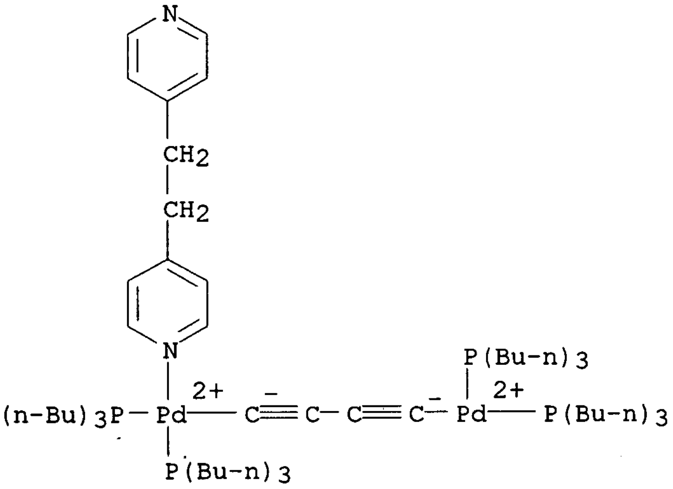
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 122395-85-1 CAPLUS

CN Palladium(2+), μ-1,3-butadiyne-1,4-diyl[4,4'-(1,2-ethanediyl)bis[pyridine]-N]tetrakis(tributylphosphine)di-, stereoisomer, bis[hexafluorophosphate(1-)] (9CI) (CA INDEX NAME)

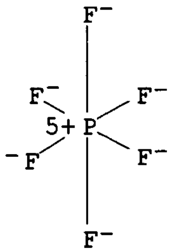
CM 1

CRN 122395-84-0
CMF C64 H120 N2 P4 Pd2
CCI CCS



CM 2

CRN 16919-18-9
CMF F6 P
CCI CCS



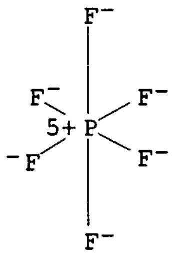
L38 ANSWER 19 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1989:31756 CAPLUS
DOCUMENT NUMBER: 110:31756
TITLE: Structures of thiamine hexafluorophosphate monohydrate, thiaminium diperchlorate, thiaminium bis(hexafluorophosphate) tetrahydrate, and thiaminemonophosphate hexafluorophosphate dihydrate
AUTHOR(S): Aoki, Katsuyuki; Yamazaki, Hiroshi; Waragai, Koji; Itokawa, Hideji
CORPORATE SOURCE: Inst. Phys. Chem. Res., Wako, 351-01, Japan
SOURCE: Acta Crystallographica, Section C: Crystal Structure Communications (1988), C44(11), 1949-55
CODEN: ACSCEE; ISSN: 0108-2701
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Thiamine hexafluorophosphate monohydrate is monoclinic, space group P21/n, with a 12.968(2), b 11.381(2), c 12.335(3) Å, and β 92.71(2)°; dc = 1.564 for Z = 4; final R = 0.047 for 2522 reflections. Thiaminium diperchlorate is monoclinic, space group P21/n, with a 18.728(5), b 7.683(1), c 13.968(3) Å, and β 101.87(2)°; dc = 1.571 for Z = 4; final R = 0.064 for 2771 reflections. Thiaminium bis(hexafluorophosphate) tetrahydrate is P21/a, with a 11.198(2), b 26.659(7), c 8.407(2) Å, and β 90.03(2)°; dc = 1.663 for Z = 4; final R = 0.060 for 2190 reflections. Thiaminemonophosphate hexafluorophosphate dehydrate is triclinic, space group P.hivin.1, with a 11.633(1), b = 11.255(2), c = 8.441(2) Å, α 78.80(2), β 94.90(1), and γ 103.63(1)°; dc = 1.679 for Z = 2; final R = 0.045 for 3092 reflections. Atomic coordinates are given. In each compound, the thiamine moiety that adopts the F conformation holds a monovalent anion in a position in which the anion interacts with the thiazolium ring via a H bond with the acidic C(2)H and an electrostatic interaction with the pos. charged S(1) atom, and it further contacts, possibly electrostatically, with the pyrimidine (or pyrimidinium) ring.

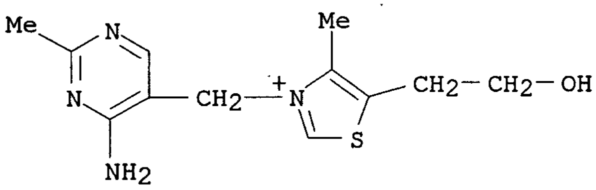
IT **118230-84-5**, Thiamine hexafluorophosphate(1-) monohydrate **118230-88-9**, Thiaminium bis[hexafluorophosphate(1-)] tetrahydrate **118250-47-8**, Thiamine monophosphate hexafluorophosphate(1-) dihydrate
RL: PRP (Properties)
(crystal structure of)

RN 118230-84-5 CAPLUS
CN Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methyl-, hexafluorophosphate(1-), monohydrate (9CI) (CA INDEX NAME)

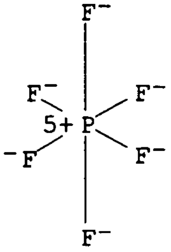
```
CM   1

CRN  118230-83-4
CMF  C12 H17 N4 O S . F6 P

     CM   2

     CRN  16919-18-9
     CMF  F6 P
     CCI  CCS
```



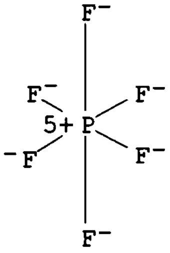
```
     CM   3

     CRN  70-16-6
     CMF  C12 H17 N4 O S
```



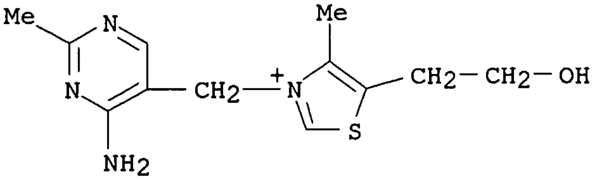
```
RN   118230-88-9  CAPLUS
CN   Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-
     hydroxyethyl)-4-methyl-, hexafluorophosphate(1-),
     mono[hexafluorophosphate(1-)], tetrahydrate (9CI)  (CA INDEX NAME)

     CM   1

     CRN  16940-81-1
     CMF  F6 P . H
     CCI  CCS
```



```
     CM   2

     CRN  118230-83-4
     CMF  C12 H17 N4 O S . F6 P

          CM   3

          CRN  16919-18-9
          CMF  F6 P
          CCI  CCS
```



```
          CM   4

          CRN  70-16-6
          CMF  C12 H17 N4 O S
```



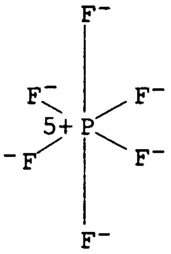
```
RN   118250-47-8  CAPLUS
CN   Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-4-methyl-5-[2-
     (phosphonooxy)ethyl]-, hexafluorophosphate(1-), dihydrate (9CI)  (CA
     INDEX NAME)
```

CM 1

CRN 118250-46-7
CMF C12 H18 N4 O4 P S . F6 P

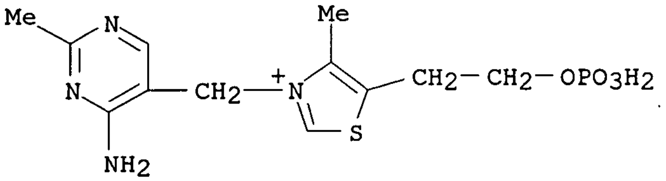
CM 2

CRN 16919-18-9
CMF F6 P
CCI CCS



CM 3

CRN 10023-48-0
CMF C12 H18 N4 O4 P S

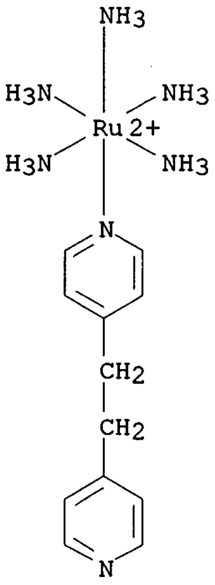


L38 ANSWER 20 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1985:87454 CAPLUS
DOCUMENT NUMBER: 102:87454
TITLE: Directed, intramolecular electron transfer in mixed-valence dimers
AUTHOR(S): Curtis, Jeffrey C.; Bernstein, James S.; Meyer, Thomas J.
CORPORATE SOURCE: Dep. Chem., Univ. San Francisco, San Francisco, CA, 94132, USA
SOURCE: Inorganic Chemistry (1985), 24(3), 385-97
CODEN: INOCAJ; ISSN: 0020-1669
DOCUMENT TYPE: Journal
LANGUAGE: English

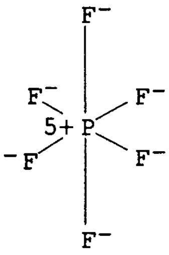
AB The results are reported of an investigation on the excited-state properties of a series of bichromophoric Ru dimers where the effects of the nature of the bridging ligand, the identity of the lowest lying excited state, and the overall electron content can be varied systematically.

IT **54713-94-9**

```
     RL: USES (Uses)
        (spectral characteristics of)
RN   54713-94-9  CAPLUS
CN   Ruthenium(2+), pentaammine[4,4'-(1,2-ethanediyl)bis[pyridine]-N]-,
     (OC-6-32)-, bis[hexafluorophosphate(1-)] (9CI)  (CA INDEX NAME)

     CM   1

     CRN  54713-93-8
     CMF  C12 H27 N7 Ru
     CCI  CCS
```



```
     CM   2

     CRN  16919-18-9
     CMF  F6 P
     CCI  CCS
```



```
L38  ANSWER 21 OF 23  CAPLUS  COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER:         1983:428601  CAPLUS
DOCUMENT NUMBER:          99:28601
TITLE:                    Autoxidation of binuclear ruthenium(II) ammines
```

AUTHOR(S): Stanbury, David M.; Gaswick, Dennis; Brown, Gilbert M.; Taube, Henry
CORPORATE SOURCE: Dep. Chem., Stanford Univ., Stanford, CA, 94305, USA
SOURCE: Inorganic Chemistry (1983), 22(14), 1975-82
CODEN: INOCAJ; ISSN: 0020-1669
DOCUMENT TYPE: Journal
LANGUAGE: English

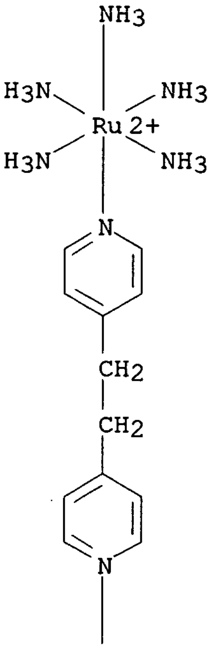
AB The reduction of O to H2O2 by a series of binuclear Ru(II) ammines was studied in acidic aqueous solution The complex [(Ru(NH3)5)2L]4+, where L = BPDO = meso-4,5-bis(4-pyridyl)-2,2-dimethyl-1,3-dioxolane was studied in greatest detail. BPDO has a geometry such as to force the 2 Ru centers into close proximity. The kinetics of the autoxidn. of the BPDO binuclear complex, as measured by the decay of the charge-transfer band characteristic of Ru(II) pyridyl type complexes, showed biphasic behavior. The 1st phase corresponds to the pseudo-1st-order reaction of the fully reduced complex, while the 2nd phase corresponds to the reaction of the mixed-valence species. Inhibition of the 2nd phase by Ru(III) at higher pH is taken as evidence that the mechanism involves outer-sphere electron transfer to form free superoxide. Subsequent protonation of superoxide and reduction to H2O2 complete the reaction. By comparison of the rates and expected steric and electrostatic effects, it is argued that the mechanism of the 1st phase likewise has a rate-limiting step involving outer-sphere generation of superoxide.

IT **85894-04-8 85894-09-3**
RL: CAT (Catalyst use); USES (Uses)
(catalyst, for reduction of oxygen to hydrogen peroxide)
RN 85894-04-8 CAPLUS
CN Ruthenium(4+), decaammine[μ-[4,4'-(1,2-ethanediyl)bis[pyridine]-N:N']]di-, tetrakis[hexafluorophosphate(1-)] (9CI) (CA INDEX NAME)

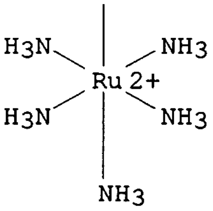
CM 1

CRN 85894-03-7
CMF C12 H42 N12 Ru2
CCI CCS

PAGE 1-A

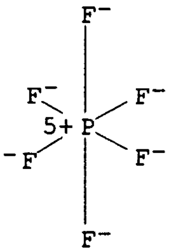


PAGE 2-A

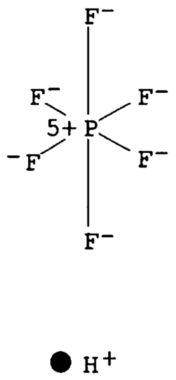


CM 2

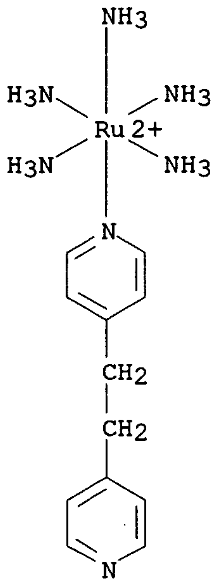
CRN 16919-18-9
CMF F6 P
CCI CCS



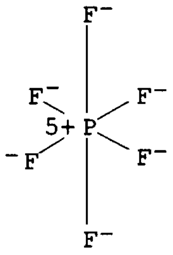
```
RN   85894-09-3  CAPLUS
CN   Ruthenium(2+), pentaammine[4,4'-(1,2-ethanediyl)bis[pyridine]-N]-,
     (OC-6-22)-, bis[hexafluorophosphate(1-)], mono[hexafluorophosphate(1-
     )] (9CI)  (CA INDEX NAME)

     CM   1

     CRN  16940-81-1
     CMF  F6 P . H
     CCI  CCS
```



```
     CM   2

     CRN  54713-94-9
     CMF  C12 H27 N7 Ru . 2 F6 P

          CM   3

          CRN  54713-93-8
          CMF  C12 H27 N7 Ru
          CCI  CCS
```



```
CM   4

CRN  16919-18-9
CMF  F6 P
CCI  CCS
```



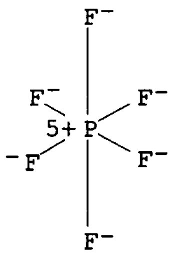
```
L38  ANSWER 22 OF 23  CAPLUS  COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER:         1981:543262  CAPLUS
DOCUMENT NUMBER:          95:143262
TITLE:                    Metal to metal interactions in weakly coupled
                          mixed-valence complexes based on ruthenium ammines
AUTHOR(S):                Sutton, James E.; Taube, H.
CORPORATE SOURCE:         Dep. Chem., Stanford Univ., Stanford, CA, 94305,
                          USA
SOURCE:                   Inorganic Chemistry (1981), 20(10), 3125-34
                          CODEN: INOCAJ; ISSN: 0020-1669
DOCUMENT TYPE:            Journal
LANGUAGE:                 English
AB   A series of binuclear pentaammineruthenium complexes bridged by
     4,4'-bipyridyl-type ligands were prepared  The bridging ligands used
     were 4,4'-bipyridyl, 3,3'-dimethyl-4,4'-bipyridy, di-4-pyridylmethane,
     di-4-pyridylamine, 1,2-di-4-pyridylethylene, and di-4-
```

pyridylacetylene. Absorption spectra were determined as well as electrochem. properties. Of special interest was the determination of the stability of the mixed-valent relative to the isovalent state. The comproportionation consts., in most instances determined by spectrophotometric titration, at 25° were 20, 9.8, 6.7, .apprx.26, .apprx.14, and 13.8, resp., for the systems based on the bridging ligands mentioned above. The stabilization of the mixed-valence state arising from electron delocalization was estimated from the oscillator strength of the intervalence band with use of Hush's theory, and the Kirkwood-Westheimer ellipsoid model was used to calculate the electrostatic interaction. According to anal., in all cases the resonance coupling in the mixed-valence state makes a minor contribution to its stability, the major factors being the electrostatic interaction, a destabilization of the [2,2] state by delocalization and stabilization of the [3,2] state by the inductive effect of the 3+ charge. The properties of the mononuclear pentaammineruthenium complexes containing di-4-pyridylmethane and di-4-pyridylamine are also reported in this study.

IT **78088-89-8P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and electronic spectrum of)
RN 78088-89-8 CAPLUS
CN Ruthenium(2+), pentaammine[4,4'-methylenebis[pyridine]-N]-, (OC-6-22)-, bis[hexafluorophosphate(1-)], mono[hexafluorophosphate(1-)] (9CI) (CA INDEX NAME)

CM 1

CRN 16940-81-1
CMF F6 P . H
CCI CCS



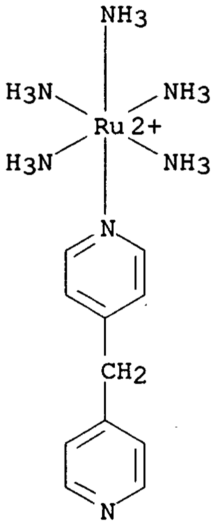
● H^+

CM 2

CRN 78088-88-7
CMF C11 H25 N7 Ru . 2 F6 P

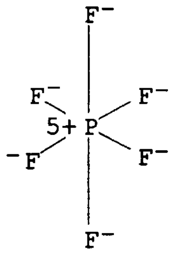
CM 3

CRN 78088-87-6
CMF C11 H25 N7 Ru
CCI CCS



CM 4

CRN 16919-18-9
CMF F6 P
CCI CCS



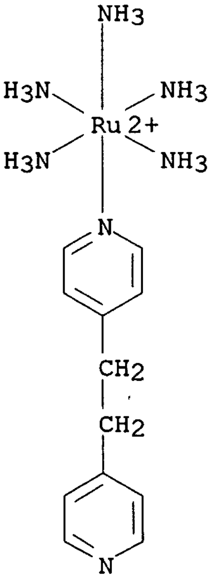
L38 ANSWER 23 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1976:413122 CAPLUS
DOCUMENT NUMBER: 85:13122
TITLE: Effects of weak metal-metal interactions in ligand-bridged complexes of ruthenium. Dimeric complexes containing ruthenium ions in different coordination environments
AUTHOR(S): Callahan, Robert W.; Brown, Gilbert M.; Meyer, Thomas J.
CORPORATE SOURCE: Dep. Chem., Univ. North Carolina, Chapel Hill, NC, USA
SOURCE: Inorganic Chemistry (1975), 14(7), 1443-53
CODEN: INOCAJ; ISSN: 0020-1669
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The preparation and characterization of the salts
[(NH3)5Ru(L)RuCl(bipy)2](PF6)3 (L = pyrazine (pyz), 4,4'-bipyridine

(4,4'-bipy), trans-1,2-bis(4-pyridyl)ethylene (BPE), and 1,2-bis(4-pyridyl)ethane (BPA)) are described. The 3+ dimeric cations undergo a reversible 1-electron oxidation either chemical or electrochem. in MeCN to give the mixed-valence (Ru(III)-Ru(II)) ions, [(NH3)5Ru(L)RuCl(bipy)2]4+. In the mixed-valence ions, the site of oxidation is largely localized on the (NH3)5Ru group. The twice-oxidized 5+ ions also were shown to exist in solution using electrochem. methods. For the ions in which the bridging ligand has an intact π system (pyz, 4,4'-bipy, or BPE), the effects of weak metal-metal interactions are observed in spectral and reduction potential data and in the appearance of intervalence transfer bands for the mixed-valence ions. With BPA as the bridging ligand, the N-heterocyclic π systems are separated by the saturated -CH2CH2- linkage, and no evidence for metal-metal electronic interactions was obtained. From the properties of the intervalence transfer band for the mixed-valence pyrazine-bridged dimer, it can be estimated that electronic interactions in the ground state are lower by a factor of 3 than for the Creutz and Taube ion, [(NH3)5Ru(pyz)Ru(NH3)5]5+.

IT **54713-94-9P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 54713-94-9 CAPLUS
CN Ruthenium(2+), pentaammine[4,4'-(1,2-ethanediyl)bis[pyridine]-N]-, (OC-6-32)-, bis[hexafluorophosphate(1-)] (9CI) (CA INDEX NAME)

CM 1

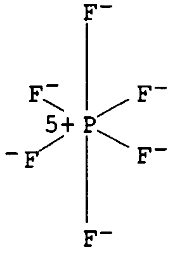
CRN 54713-93-8
CMF C12 H27 N7 Ru
CCI CCS



CM 2

CRN 16919-18-9
CMF F6 P

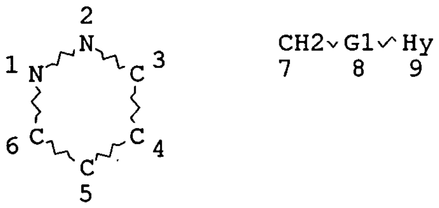
```
     CCI   CCS
```



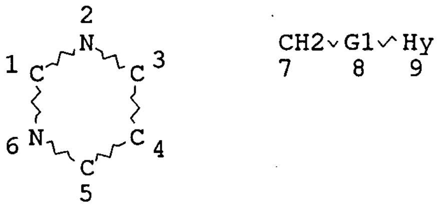
```
FILE 'CAOLD' ENTERED AT 10:07:40 ON 14 JUN 2005
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

FILE COVERS 1907-1966
FILE LAST UPDATED:  01 May 1997 (19970501/UP)

  This file contains CAS Registry Numbers for easy and accurate
  substance identification.  Title keywords, authors, patent
  assignees, and patent information, e.g., patent numbers, are
  now searchable from 1907-1966.  TIFF images of CA abstracts
  printed between 1907-1966 are available in the PAGE
  display formats.

  New CAS Information Use Policies, enter HELP USAGETERMS for details.

  This file supports REG1stRY for direct browsing and searching of
  all substance data from the REGISTRY file.  Enter HELP FIRST for
  more information.

L39          0 L36

FILE 'USPATFULL' ENTERED AT 10:07:53 ON 14 JUN 2005
CA INDEXING COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 14 Jun 2005 (20050614/PD)
FILE LAST UPDATED: 14 Jun 2005 (20050614/ED)
HIGHEST GRANTED PATENT NUMBER: US6907616
HIGHEST APPLICATION PUBLICATION NUMBER: US2005125869
CA INDEXING IS CURRENT THROUGH 14 Jun 2005 (20050614/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 14 Jun 2005 (20050614/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Apr 2005
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Apr 2005

>>>  USPAT2 is now available.  USPATFULL contains full text of the     <<<
>>>  original, i.e., the earliest published granted patents or         <<<
>>>  applications.  USPAT2 contains full text of the latest US         <<<
>>>  publications, starting in 2001, for the inventions covered in     <<<
>>>  USPATFULL.  A USPATFULL record contains not only the original     <<<
>>>  published document but also a list of any subsequent             <<<
>>>  publications.  The publication number, patent kind code, and      <<<
>>>  publication date for all the US publications for an invention     <<<
>>>  are displayed in the PI (Patent Information) field of USPATFULL   <<<
>>>  records and may be searched in standard search fields, e.g., /PN, <<<
>>>  /PK, etc.                                                        <<<

>>>  USPATFULL and USPAT2 can be accessed and searched together       <<<
>>>  through the new cluster USPATALL.  Type FILE USPATALL to          <<<
>>>  enter this cluster.                                               <<<
>>>                                                                    <<<
>>>  Use USPATALL when searching terms such as patent assignees,       <<<
>>>  classifications, or claims, that may potentially change from      <<<
>>>  the earliest to the latest publication.                           <<<

This file contains CAS Registry Numbers for easy and accurate
substance identification.

L40          1 L36

L40  ANSWER 1 OF 1  USPATFULL on STN
ACCESSION NUMBER:        2003:67628  USPATFULL
TITLE:                   Cyclic delocalized cations connected by spacer
                         groups
INVENTOR(S):             McEwen, Alan B., Melrose, MA, United States
PATENT ASSIGNEE(S):      Covalent Associates, Inc., Woburn, MA, United
                         States (U.S. corporation)

                              NUMBER        KIND    DATE
                         ---------------- ------ --------
PATENT INFORMATION:      US 6531241         B1   20030311
APPLICATION INFO.:       US 2000-611787          20000707  (9)

                                NUMBER         DATE
                         ------------------ --------
PRIORITY INFORMATION:    US 1999-142726P    19990708 (60)
DOCUMENT TYPE:           Utility
FILE SEGMENT:            GRANTED
PRIMARY EXAMINER:        Howard, Jacqueline V.
LEGAL REPRESENTATIVE:    Weingarten, Schurgin, Gagnebin & Lebovici LLP
NUMBER OF CLAIMS:        13
EXEMPLARY CLAIM:         1
NUMBER OF DRAWINGS:      7 Drawing Figure(s); 3 Drawing Page(s)
LINE COUNT:              510
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB      Cyclic delocalized cations joined together by spacer groups, with
        anions of equal number to cations to maintain charge neutrality, are
        disclosed. These spacer groups may be organic or inorganic in origin
        and may vary in length. The spacer groups may be saturated,
        containing single bonds, or may be unsaturated, containing double
        and triple bonds. With appropriate design these materials can have
        melting and glass transition temperatures below, around, and above
        room temperature. The lyophobic character of these materials may be
        adjusted, providing unique properties. These materials are well
        suited for use as electrolytes, lubricants, solvents for extractions
        and for running reactions, biphase catalysis media, media for
        electroluminescent devices.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

FILE 'MEDLINE' ENTERED AT 10:08:08 ON 14 JUN 2005

FILE 'BIOSIS' ENTERED AT 10:08:08 ON 14 JUN 2005
Copyright (c) 2005 The Thomson Corporation
```

```
FILE 'EMBASE' ENTERED AT 10:08:08 ON 14 JUN 2005
COPYRIGHT (C) 2005 Elsevier Inc. All rights reserved.

L41          0 L36

=> fil hom
FILE 'HOME' ENTERED AT 10:08:12 ON 14 JUN 2005
```

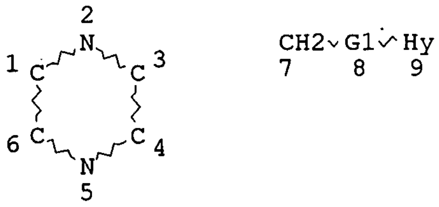
```
=> d que stat l25; d que stat l36; d his ful
L1                SCR 2040
L2                STR
```



```
REP G1=(0-9) CH2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS MCY  UNS  AT   9
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS X5 C  M1 N  AT   9

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS   9

STEREO ATTRIBUTES: NONE
L3                STR
```

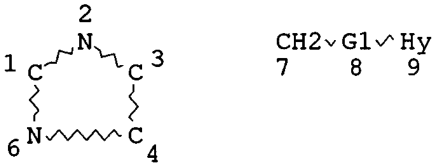


```
REP G1=(0-9) CH2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS MCY  UNS  AT   9
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS X5 C  M1 N  AT   9

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS   9

STEREO ATTRIBUTES: NONE
L4                STR
```

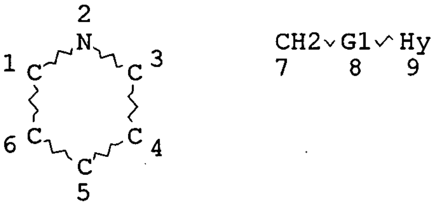


```
REP G1=(0-9) CH2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
```

```
GGCAT   IS MCY  UNS  AT   9
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS X5 C  M1 N  AT   9

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS   9

STEREO ATTRIBUTES: NONE
L5               STR
```

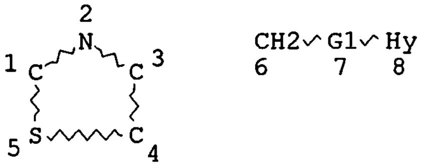


```
REP G1=(0-9) CH2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS MCY  UNS  AT   9
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS X5 C  M1 N  AT   9

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS   8

STEREO ATTRIBUTES: NONE
L6   (       200)SEA FILE=REGISTRY SSS FUL L2 AND L1
L7   (      7037)SEA FILE=REGISTRY SSS FUL L3 AND L1
L8   (      1701)SEA FILE=REGISTRY SSS FUL L4 AND L1
L9   (     11994)SEA FILE=REGISTRY SSS FUL L5 AND L1
L10        20293 SEA FILE=REGISTRY ABB=ON  PLU=ON  L6 OR L7 OR L8 OR L9
L11              SCR 2040
L12              STR
```

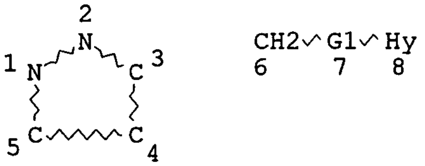


```
REP G1=(0-9) CH2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS MCY  UNS  AT   9
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS X5 C  M1 N  AT   9

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS   9

STEREO ATTRIBUTES: NONE
L13        51091 SEA FILE=REGISTRY SSS FUL L12 AND L11
```

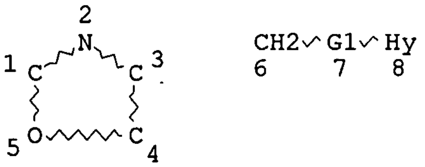
```
L14             STR
```



```
REP G1=(0-9) CH2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS MCY  UNS  AT   8
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   8

STEREO ATTRIBUTES: NONE
L15             SCR 2040
L16             STR
```

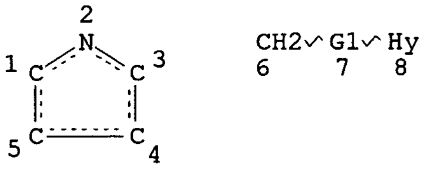


```
REP G1=(0-9) CH2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS MCY  UNS  AT   8
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   8

STEREO ATTRIBUTES: NONE
L17             STR
```

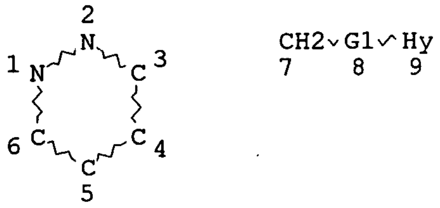


```
REP G1=(0-9) CH2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS MCY  UNS  AT   8
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   8
```

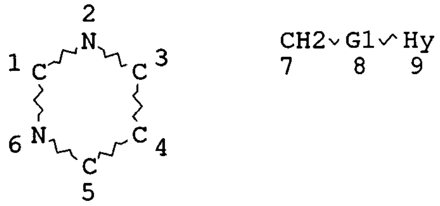
```
STEREO ATTRIBUTES: NONE
L18                STR
```



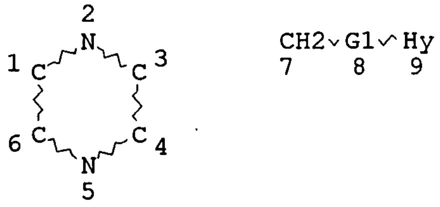
```
REP G1=(0-9) CH2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS MCY  UNS  AT   8
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS   8

STEREO ATTRIBUTES: NONE
L19        32143 SEA FILE=REGISTRY SSS FUL (L14 OR L16 OR L18 OR L17) AND
                 L15
L20              STR

Hy~G1~Hy
 1  2  3

REP G1=(1-10) CH2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS MCY  AT   1
GGCAT   IS MCY  AT   3
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   3

STEREO ATTRIBUTES: NONE
L21         4738 SEA FILE=REGISTRY SUB=L10 SSS FUL L20
L22         7486 SEA FILE=REGISTRY SUB=L13 SSS FUL L20
L23         4204 SEA FILE=REGISTRY SUB=L19 SSS FUL L20
L24         5033 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L21 OR L22 OR L23) AND
                 NR=2
L25         2722 SEA FILE=REGISTRY ABB=ON  PLU=ON  L24 AND NC=>2



L1               SCR 2040
L2               STR
```



```
REP G1=(0-9) CH2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS MCY  UNS  AT   9
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS X5 C  M1 N  AT   9

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS   9

STEREO ATTRIBUTES: NONE
L3                STR
```

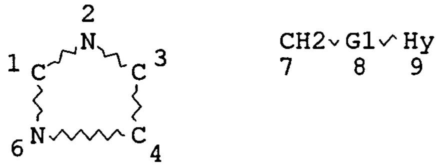


```
REP G1=(0-9) CH2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS MCY  UNS  AT   9
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS X5 C  M1 N  AT   9

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS   9

STEREO ATTRIBUTES: NONE
L4                STR
```

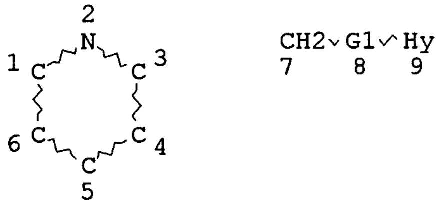


```
REP G1=(0-9) CH2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS MCY  UNS  AT   9
DEFAULT ECLEVEL IS LIMITED
```

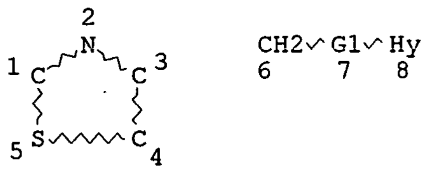
```
ECOUNT   IS X5 C  M1 N  AT   9

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS   9

STEREO ATTRIBUTES: NONE
L5                STR
```



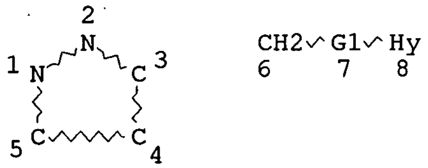
```
REP G1=(0-9) CH2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS MCY  UNS  AT   9
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS X5 C  M1 N  AT   9

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS   8

STEREO ATTRIBUTES: NONE
L6   (        200)SEA FILE=REGISTRY SSS FUL L2 AND L1
L7   (       7037)SEA FILE=REGISTRY SSS FUL L3 AND L1
L8   (       1701)SEA FILE=REGISTRY SSS FUL L4 AND L1
L9   (      11994)SEA FILE=REGISTRY SSS FUL L5 AND L1
L10         20293 SEA FILE=REGISTRY ABB=ON  PLU=ON  L6 OR L7 OR L8 OR L9
L11               SCR 2040
L12               STR
```



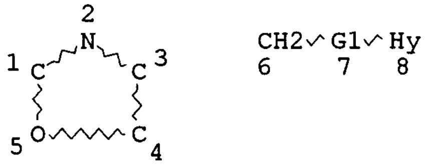
```
REP G1=(0-9) CH2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS MCY  UNS  AT   9
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS X5 C  M1 N  AT   9

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS   9

STEREO ATTRIBUTES: NONE
L13        51091 SEA FILE=REGISTRY SSS FUL L12 AND L11
L14              STR
```



```
REP G1=(0-9) CH2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS MCY  UNS  AT   8
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   8

STEREO ATTRIBUTES: NONE
L15              SCR 2040
L16              STR
```

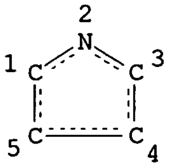


```
REP G1=(0-9) CH2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS MCY  UNS  AT   8
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   8

STEREO ATTRIBUTES: NONE
L17              STR
```



```
REP G1=(0-9) CH2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS MCY  UNS  AT   8
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   8
```

```
STEREO ATTRIBUTES: NONE
L18                STR
```

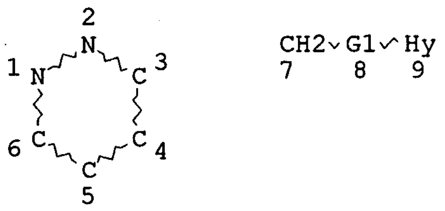


```
CH2~G1~Hy
6    7   8

REP G1=(0-9) CH2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS MCY  UNS  AT   8
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS   8

STEREO ATTRIBUTES: NONE
L19        32143 SEA FILE=REGISTRY SSS FUL (L14 OR L16 OR L18 OR L17) AND
                 L15
L20              STR

Hy~G1~Hy
 1   2   3

REP G1=(1-10) CH2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS MCY  AT   1
GGCAT   IS MCY  AT   3
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   3

STEREO ATTRIBUTES: NONE
L21         4738 SEA FILE=REGISTRY SUB=L10 SSS FUL L20
L22         7486 SEA FILE=REGISTRY SUB=L13 SSS FUL L20
L23         4204 SEA FILE=REGISTRY SUB=L19 SSS FUL L20
L24         5033 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L21 OR L22 OR L23) AND
                 NR=2
L35          341 SEA FILE=REGISTRY ABB=ON  PLU=ON  L24 AND P=>1
L36           32 SEA FILE=REGISTRY ABB=ON  PLU=ON  L35 AND F=>6



     (FILE 'REGISTRY' ENTERED AT 09:12:25 ON 14 JUN 2005)
                 DEL HIS Y
                 ACT DAVISZ6772/A
                ---------
L1               SCR 2040
L2               STR
L3               STR
```

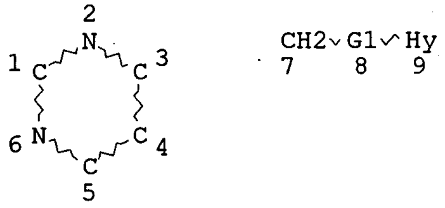
```
L4                STR
L5                STR
L6   (        200)SEA SSS FUL L2 AND L1
L7   (       7037)SEA SSS FUL L3 AND L1
L8   (       1701)SEA SSS FUL L4 AND L1
L9   (      11994)SEA SSS FUL L5 AND L1
L10         20293 SEA ABB=ON  PLU=ON  L6 OR L7 OR L8 OR L9
                 ---------
                  ACT ZDAVIS677218/A
                 ---------
L11               SCR 2040
L12               STR
L13         51091 SEA SSS FUL L12 AND L11
                 ---------
                  ACT DAVIS677218/A
                 ---------
L14               STR
L15               SCR 2040
L16               STR
L17               STR
L18               STR
L19         32143 SEA SSS FUL (L14 OR L16 OR L18 OR L17) AND L15
                 ---------
                  D QUE STAT L10
                  D QUE STAT L13
                  D QUE STAT L19
L20               STR
L21          4738 SEA SUB=L10 SSS FUL L20
L22          7486 SEA SUB=L13 SSS FUL L20
L23          4204 SEA SUB=L19 SSS FUL L20
L24          5033 SEA ABB=ON  PLU=ON  (L21 OR L22 OR L23) AND NR=2
L25          2722 SEA ABB=ON  PLU=ON  L24 AND NC=>2
                  D QUE STAT

     FILE 'REGISTRY' ENTERED AT 10:00:04 ON 14 JUN 2005
                  D QUE STAT

     FILE 'CAPLUS' ENTERED AT 10:00:04 ON 14 JUN 2005
L26         26876 SEA ABB=ON  PLU=ON  L25
L*** DEL        4 S L26 AND LO ?/AU
L*** DEL        1 S L27 AND HO ?/AU
                  D TI AU
L27            56 SEA ABB=ON  PLU=ON  L26(L)(?VIRAL? OR ?VIRUS? OR VIRUCID?)

L28            47 SEA ABB=ON  PLU=ON  L27 NOT (PY=>2003 OR PD=>20030613)
                  SEL HIT L28 1-47 RN
                  D L28 1-47 IBIB ABS HITSTR

     FILE 'REGISTRY' ENTERED AT 10:02:16 ON 14 JUN 2005
L29            27 SEA ABB=ON  PLU=ON  (59-43-8/BI OR 67-03-8/BI OR 154-87-0/B
                  I OR 582-36-5/BI OR 10549-37-8/BI OR 532-40-1/BI OR
                  64690-20-6/BI OR 64690-21-7/BI OR 64690-23-9/BI OR
                  64690-31-9/BI OR 64690-54-6/BI OR 64690-55-7/BI OR
                  64690-56-8/BI OR 64690-57-9/BI OR 64690-58-0/BI OR
                  64690-86-4/BI OR 64690-87-5/BI OR 64690-90-0/BI OR
                  64690-91-1/BI OR 64690-93-3/BI OR 64691-05-0/BI OR
                  64691-06-1/BI OR 64691-08-3/BI OR 64735-37-1/BI OR
                  64735-43-9/BI OR 64849-50-9/BI OR 7019-71-8/BI)
                  D QUE STAT
     FILE 'CAOLD' ENTERED AT 10:02:35 ON 14 JUN 2005
L30            57 SEA ABB=ON  PLU=ON  L29
                  D 1-57

     FILE 'USPATFULL' ENTERED AT 10:02:49 ON 14 JUN 2005
L31           858 SEA ABB=ON  PLU=ON  L29
L32             0 SEA ABB=ON  PLU=ON  L31(L)(?VIRAL? OR ?VIRUS? OR VIRUCID?)


     FILE 'MEDLINE, BIOSIS, EMBASE' ENTERED AT 10:03:56 ON 14 JUN 2005
L33         25495 SEA ABB=ON  PLU=ON  L30
L34             0 SEA ABB=ON  PLU=ON  L33(L)(?VIRUS? OR ?VIRAL? OR VIRUCID?)


     FILE 'REGISTRY' ENTERED AT 10:04:29 ON 14 JUN 2005
L35           341 SEA ABB=ON  PLU=ON  L24 AND P=>1
L36            32 SEA ABB=ON  PLU=ON  L35 AND F=>6
                  D QUE STAT

     FILE 'CAPLUS' ENTERED AT 10:06:20 ON 14 JUN 2005
L37            23 SEA ABB=ON  PLU=ON  L36
L38            23 SEA ABB=ON  PLU=ON  L37 NOT L28
                  D 1-23 IBIB ABS HITSTR

     FILE 'CAOLD' ENTERED AT 10:07:40 ON 14 JUN 2005
L39             0 SEA ABB=ON  PLU=ON  L36

     FILE 'USPATFULL' ENTERED AT 10:07:53 ON 14 JUN 2005
L40             1 SEA ABB=ON  PLU=ON  L36
                  D IBIB ABS

     FILE 'MEDLINE, BIOSIS, EMBASE' ENTERED AT 10:08:08 ON 14 JUN 2005
L41             0 SEA ABB=ON  PLU=ON  L36

     FILE 'HOME' ENTERED AT 10:08:12 ON 14 JUN 2005
                  D QUE STAT L25
                  D QUE STAT L36


     FILE REGISTRY
     Property values tagged with IC are from the ZIC/VINITI data file
     provided by InfoChem.

     STRUCTURE FILE UPDATES:   13 JUN 2005  HIGHEST RN 852200-37-4
     DICTIONARY FILE UPDATES:  13 JUN 2005  HIGHEST RN 852200-37-4

     New CAS Information Use Policies, enter HELP USAGETERMS for details.

     TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

       Please note that search-term pricing does apply when
       conducting SmartSELECT searches.

     ***************************************************************
     *                                                                         *
     * The CA roles and document type information have been removed from *
     * the IDE default display format and the ED field has been added,    *
     * effective March 20, 2005.  A new display format, IDERL, is now     *
* available and contains the CA role and document type information. *
*                                                                    *
**********************************************************************

Crossover limits have been increased.  See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

FILE CAPLUS

Copyright of the articles to which records in this database refer is
held by the publishers listed in the PUBLISHER (PB) field (available
for records published or updated in Chemical Abstracts after December
26, 1996), unless otherwise indicated in the original publications.
The CA Lexicon is the copyrighted intellectual property of the
American Chemical Society and is provided to assist you in searching
databases on STN.  Any dissemination, distribution, copying, or storin
of this information, without the prior written consent of CAS, is
strictly prohibited.

FILE COVERS 1907 - 14 Jun 2005  VOL 142 ISS 25
FILE LAST UPDATED: 13 Jun 2005  (20050613/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

  This file contains CAS Registry Numbers for easy and accurate
  substance identification.

FILE CAOLD
FILE COVERS 1907-1966
FILE LAST UPDATED:  01 May 1997 (19970501/UP)

  This file contains CAS Registry Numbers for easy and accurate
  substance identification.  Title keywords, authors, patent
  assignees, and patent information, e.g., patent numbers, are
  now searchable from 1907-1966.  TIFF images of CA abstracts
  printed between 1907-1966 are available in the PAGE
  display formats.

  New CAS Information Use Policies, enter HELP USAGETERMS for details.

  This file supports REG1stRY for direct browsing and searching of
  all substance data from the REGISTRY file.  Enter HELP FIRST for
  more information.

FILE USPATFULL
FILE COVERS 1971 TO PATENT PUBLICATION DATE: 14 Jun 2005 (20050614/PD)
FILE LAST UPDATED: 14 Jun 2005 (20050614/ED)
HIGHEST GRANTED PATENT NUMBER: US6907616
HIGHEST APPLICATION PUBLICATION NUMBER: US2005125869
CA INDEXING IS CURRENT THROUGH 14 Jun 2005 (20050614/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 14 Jun 2005 (20050614/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Apr 2005
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Apr 2005

>>>  USPAT2 is now available.  USPATFULL contains full text of the
>>>  original, i.e., the earliest published granted patents or
>>>  applications.  USPAT2 contains full text of the latest US
>>>  publications, starting in 2001, for the inventions covered in
>>>  USPATFULL.  A USPATFULL record contains not only the original
>>>  published document but also a list of any subsequent
>>>  publications.  The publication number, patent kind code, and
>>>  publication date for all the US publications for an invention
>>>  are displayed in the PI (Patent Information) field of USPATFULL
>>>  records and may be searched in standard search fields, e.g., /PN,
>>>  /PK, etc.

>>>  USPATFULL and USPAT2 can be accessed and searched together
>>>  through the new cluster USPATALL.  Type FILE USPATALL to
>>>  enter this cluster.
>>>
>>>  Use USPATALL when searching terms such as patent assignees,
>>>  classifications, or claims, that may potentially change from
>>>  the earliest to the latest publication.

This file contains CAS Registry Numbers for easy and accurate
substance identification.

FILE MEDLINE
 FILE LAST UPDATED: 12 JUN 2005 (20050612/UP).  FILE COVERS 1950 TO DA

 On December 19, 2004, the 2005 MeSH terms were loaded.

 The MEDLINE reload for 2005 is now available.  For details enter HELP
 RLOAD at an arrow promt (=>).  See also:

    http://www.nlm.nih.gov/mesh/
    http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html

 OLDMEDLINE now back to 1950.

 MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the
 MeSH 2005 vocabulary.

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

FILE BIOSIS
FILE COVERS 1969 TO DATE.
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 10 June 2005 (20050610/ED)

FILE RELOADED: 19 October 2003.

FILE EMBASE
 FILE COVERS 1974 TO 9 Jun 2005 (20050609/ED)

 EMBASE has been reloaded. Enter HELP RLOAD for details.

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

FILE HOME
```

```
     (FILE 'REGISTRY' ENTERED AT 10:04:29 ON 14 JUN 2005)
L1                SCR 2040
L2                STR
```

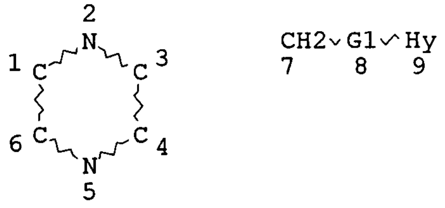
Species



```
REP G1=(0-9) CH2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS MCY  UNS  AT    9
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS X5 C  M1 N  AT    9

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS    9

STEREO ATTRIBUTES: NONE
L3                STR
```

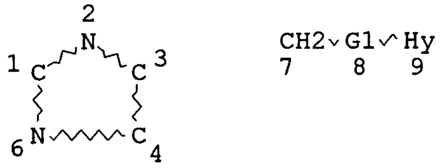


```
REP G1=(0-9) CH2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS MCY  UNS  AT    9
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS X5 C  M1 N  AT    9

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS    9

STEREO ATTRIBUTES: NONE
L4                STR
```

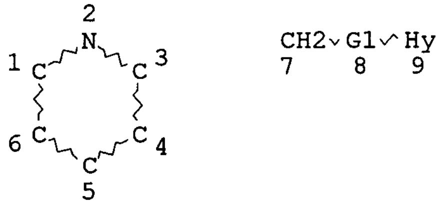


```
REP G1=(0-9) CH2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
```

```
GGCAT   IS MCY  UNS  AT   9
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS X5 C  M1 N  AT   9

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS   9

STEREO ATTRIBUTES: NONE
L5                STR
```

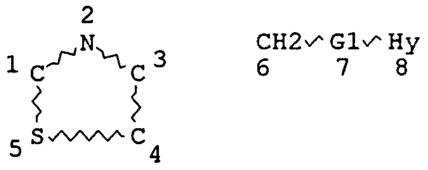


```
REP G1=(0-9) CH2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS MCY  UNS  AT   9
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS X5 C  M1 N  AT   9

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS   8

STEREO ATTRIBUTES: NONE
L6   (       200)SEA FILE=REGISTRY SSS FUL L2 AND L1
L7   (      7037)SEA FILE=REGISTRY SSS FUL L3 AND L1
L8   (      1701)SEA FILE=REGISTRY SSS FUL L4 AND L1
L9   (     11994)SEA FILE=REGISTRY SSS FUL L5 AND L1
L10        20293 SEA FILE=REGISTRY ABB=ON  PLU=ON  L6 OR L7 OR L8 OR L9
L11              SCR 2040
L12              STR
```

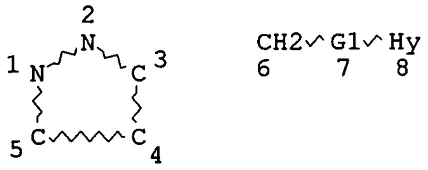


```
REP G1=(0-9) CH2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS MCY  UNS  AT   9
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS X5 C  M1 N  AT   9

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS   9

STEREO ATTRIBUTES: NONE
L13       51091 SEA FILE=REGISTRY SSS FUL L12 AND L11
```

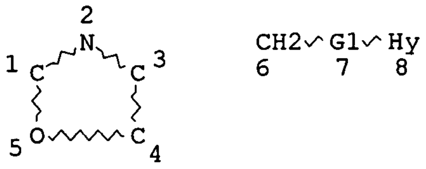
```
L14              STR
```



```
REP G1=(0-9) CH2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT    IS MCY  UNS   AT    8
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS    8

STEREO ATTRIBUTES: NONE
L15              SCR 2040
L16              STR
```

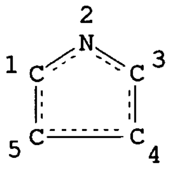


```
REP G1=(0-9) CH2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT    IS MCY  UNS   AT    8
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS    8

STEREO ATTRIBUTES: NONE
L17              STR
```



```
REP G1=(0-9) CH2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT    IS MCY  UNS   AT    8
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS    8
```

```
STEREO ATTRIBUTES: NONE
L18                STR
```



```
CH2✓G1✓Hy
6    7   8

REP G1=(0-9) CH2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS MCY  UNS  AT   8
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS   8

STEREO ATTRIBUTES: NONE
L19        32143 SEA FILE=REGISTRY SSS FUL (L14 OR L16 OR L18 OR L17) AND
                 L15
L20              STR

Hy✓G1✓Hy
 1   2   3

REP G1=(1-10) CH2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS MCY  AT   1
GGCAT   IS MCY  AT   3
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   3

STEREO ATTRIBUTES: NONE
L21          4738 SEA FILE=REGISTRY SUB=L10 SSS FUL L20
L22          7486 SEA FILE=REGISTRY SUB=L13 SSS FUL L20
L23          4204 SEA FILE=REGISTRY SUB=L19 SSS FUL L20
L24          5033 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L21 OR L22 OR L23) AND
                  NR=2 ← Only two (2) ring systems
L35           341 SEA FILE=REGISTRY ABB=ON  PLU=ON  L24 AND P=>1 ← At least one (1) P
L36            32 SEA FILE=REGISTRY ABB=ON  PLU=ON  L35 AND F=>6 ← At least six (6) F

     FILE 'CAPLUS' ENTERED AT 10:06:20 ON 14 JUN 2005
L37            23 S L36
L38            23 S L37 NOT L28

L38  ANSWER 1 OF 23  CAPLUS  COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER:          2004:1141793  CAPLUS
DOCUMENT NUMBER:           142:218796
TITLE:                     Structure and Properties of High Stability Geminal
                           Dicationic Ionic Liquids
AUTHOR(S):                 Anderson, Jared L.; Ding, Rongfang; Ellern,
```

Arkady; Armstrong, Daniel W.
CORPORATE SOURCE: Department of Chemistry, Iowa State University, Ames, IA, 50011, USA

SOURCE: Journal of the American Chemical Society (2005), 127(2), 593-604
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

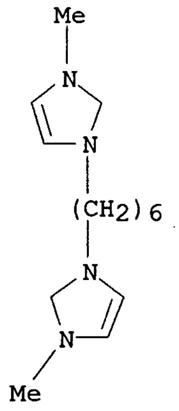
AB Thirty-nine geminal dicationic ILs were synthesized and characterized in terms of their surface tensions, densities, m.ps., refractive indexes, viscosities, and miscibilities with a polar and nonpolar solvent. Two imidazolium or pyrrolidinium cations were joined via different length hydrocarbon linkage chains (from 3 to 12 carbons long). The various geminal dications were paired with up to four different anions. The effect of the dication type, linkage chain, alkyl substituents, and anion type on the physicochem. properties of these compds. was examined Among the more interesting findings for this class of compds. was that their liquid and thermal stability ranges generally exceeded those of the more conventional, better known ILs. Indeed, this range was from -4 to >400 °C for one of the pyrrolidinium-based geminal dicationic liqs. X-ray crystallog. of the smaller solid ionic compds. indicated that there may be a correlation between the configurational degrees of freedom of the ILs and their m.ps./glass transition temps. In one case, the crystal structure showed that a dicationic moiety had three distinct conformations in an asym. unit cell. The solvation properties of the geminal dicationic ILs tend to be similar to those of their monocationic analogs.

IT **320610-48-8P 320749-62-0P 844468-69-5P**
844468-78-6P 844468-82-2P 844468-87-7P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(structure and properties of high stability geminal dicationic ionic liqs.)

RN 320610-48-8 CAPLUS
CN 1H-Imidazolium, 1,1'-(1,6-hexanediyl)bis[3-methyl-, bis[hexafluorophosphate(1-)] (9CI) (CA INDEX NAME)

CM 1

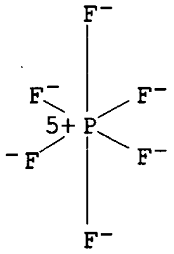
CRN 94567-59-6
CMF C14 H24 N4



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

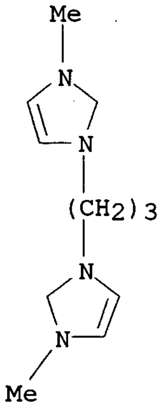
CRN 16919-18-9
CMF F6 P
CCI CCS



RN 320749-62-0 CAPLUS
CN 1H-Imidazolium, 1,1'-(1,3-propanediyl)bis[3-methyl-,
bis[hexafluorophosphate(1-)] (9CI) (CA INDEX NAME)

CM 1

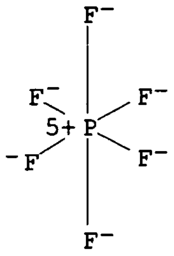
CRN 320749-60-8
CMF C11 H18 N4



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

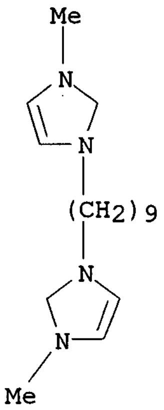
CRN 16919-18-9
CMF F6 P
CCI CCS



RN 844468-69-5 CAPLUS
CN 1H-Imidazolium, 1,1'-(1,9-nonanediyl)bis[3-methyl-, bis[hexafluorophosphate(1-)] (9CI) (CA INDEX NAME)

CM 1

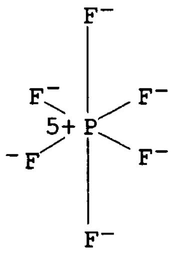
CRN 844468-66-2
CMF C17 H30 N4



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 16919-18-9
CMF F6 P
CCI CCS

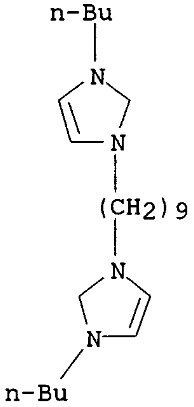


RN 844468-78-6 CAPLUS

CN 1H-Imidazolium, 1,1'-(1,9-nonanediyl)bis[3-butyl-,
bis[hexafluorophosphate(1-)] (9CI) (CA INDEX NAME)

CM 1

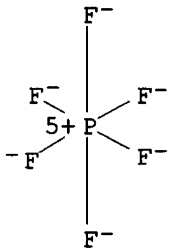
CRN 844468-75-3
CMF C23 H42 N4



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

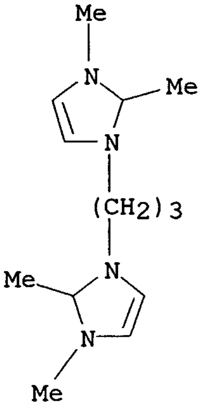
CRN 16919-18-9
CMF F6 P
CCI CCS



RN 844468-82-2 CAPLUS
CN 1H-Imidazolium, 1,1'-(1,3-propanediyl)bis[2,3-dimethyl-,
bis[hexafluorophosphate(1-)] (9CI) (CA INDEX NAME)

CM 1

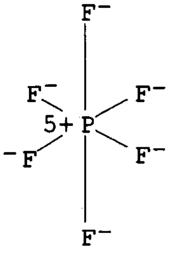
CRN 844468-80-0
CMF C13 H22 N4



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

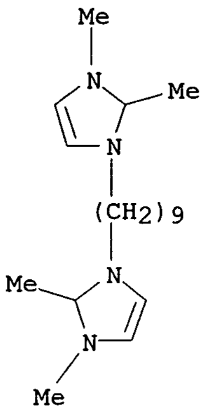
CRN 16919-18-9
CMF F6 P
CCI CCS



RN 844468-87-7 CAPLUS
CN 1H-Imidazolium, 1,1'-(1,9-nonanediyl)bis[2,3-dimethyl-, bis[hexafluorophosphate(1-)] (9CI) (CA INDEX NAME)

CM 1

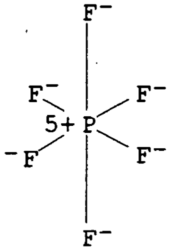
CRN 844468-84-4
CMF C19 H34 N4



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 16919-18-9
CMF F6 P
CCI CCS



REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L38 ANSWER 2 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN	
ACCESSION NUMBER:	2004:1079254 CAPLUS
DOCUMENT NUMBER:	142:219399
TITLE:	Thione complexes of Rh(i): a first comparison with the bonding and catalytic activity of related carbene and imine compounds
AUTHOR(S):	Neveling, Arno; Julius, Gerrit R.; Cronje, Stephanie; Esterhuysen, Catharine; Raubenheimer, Helgard G.
CORPORATE SOURCE:	Department of Chemistry, University of Stellenbosch, Stellenbosch, 7602, S. Afr.
SOURCE:	Dalton Transactions (2005), (1), 181-192 CODEN: DTARAF; ISSN: 1477-9226
PUBLISHER:	Royal Society of Chemistry
DOCUMENT TYPE:	Journal
LANGUAGE:	English

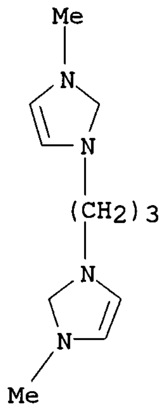
AB Heterocyclic mono(thione), trans-bis(thione), cis-bis(thione), trans-(carbene-thione), cis-(carbene-thione), trans-(phosphine-thione) and mono(imine) complexes of Rh(i) were prepared and fully characterized. Chloro(η4-1,5-cyclooctadiene)(L)rhodium(i) (1a, L = 1,3-diisopropyl-4,5-dimethyl-2,3-dihydro-1H-imidazol-2-thione; 1b, L = 1,3,4,5-tetramethyl-2,3-dihydro-1H-imidazol-2-thione) appear as isomers at room temperature due to slow coordination exchange on the S-donor atom. In the three structures determined, the substituent on the S appears syn to Cl. Hindered rotation about the Rh-carbene bond is revealed in the NMR spectra of seven new complexes with iso-Pr substituents on the heterocyclic carbene ligands. The trans influence of the thione ligands is smaller than that of carbenes but larger than that shown by imines and chloride. Thione complexes are better catalyst precursors than the carbene complexes for the hydroformylation of 1-hexene under the chosen reaction conditions: 80°, 8 MPa CO-H2 (1:1), 16 h, 1:1000 catalyst to 1-hexene ratio.

IT **320749-62-0**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of imidazolylidene with rhodium chloride complex to give mono(imine) Rh(I) complexes as hydroformylation catalyst for hexene)

RN 320749-62-0 CAPLUS
CN 1H-Imidazolium, 1,1'-(1,3-propanediyl)bis[3-methyl-, bis[hexafluorophosphate(1-)] (9CI) (CA INDEX NAME)

CM 1

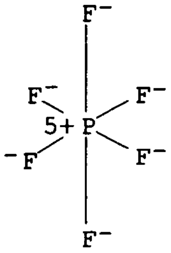
CRN 320749-60-8
CMF C11 H18 N4



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 16919-18-9
CMF F6 P
CCI CCS



REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L38 ANSWER 3 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER:	2004:278197 CAPLUS
DOCUMENT NUMBER:	141:38719
TITLE:	The counterion influence on the CH-activation of methane by palladium(II) biscarbene complexes - structures, reactivity and DFT calculations
AUTHOR(S):	Strassner, Thomas; Muehlhofer, Michael; Zeller, Alexander; Herdtweck, Eberhardt; Herrmann, Wolfgang A.
CORPORATE SOURCE:	Anorganisch-Chemisches Institut der Technischen, Technischen Universitat Munchen, Garching, 85747, Germany
SOURCE:	Journal of Organometallic Chemistry (2004), 689(8), 1418-1424 CODEN: JORCAI; ISSN: 0022-328X
PUBLISHER:	Elsevier Science B.V.
DOCUMENT TYPE:	Journal
LANGUAGE:	English
OTHER SOURCE(S):	CASREACT 141:38719

AB Novel bridged Pd(II) biscarbene complexes with different counterions are reported: 1,1'-dimethyl-3,3'-methylene-4-diimidazolin-2,2'-diylidene Pd(II) bischloride (1) and bis(trifluoroacetate) (2) were synthesized in good yields. Both complexes are active in the catalytic conversion of methane to MeOH and show comparable activities to previously published NHC-catalysts. The results of the single-crystal x-ray structure determination of 1,1'-dimethyl-3,3'-methylene-4-diimidazolin-2,2'-diylidene Pd(II) bischloride (1) and 1,1'-dimethyl-3,3'-methylene-4-diimidazolin-2,2'-diylidene Pd (II) bis(trifluoro-acetate) 2 confirmed the structural similarity to the known corresponding Pd bromide and iodide complexes. Since free 1,1'-dimethyl-R-3,3'-methylene-4-diimidazolin-2,2'-diylidene are only available in low yields these compds. were synthesized via the bromide complex, exchanging the counterion by AgCF3COO or by exchanging the counterion of the imidazolium salt by NH4PF6.

IT **433231-08-4P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and cyclopalladation of methylenediimidazolium to give methylenediimidazolindiylidene Pd dichloride as catalyst for conversion of methane to methanol)

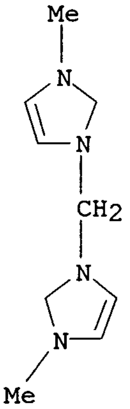
RN 433231-08-4 CAPLUS

CN 1H-Imidazolium, 1,1'-methylenebis[3-methyl-, bis[hexafluorophosphate(1-

)] (9CI) (CA INDEX NAME)

CM 1

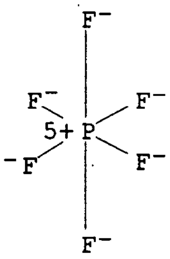
CRN 111127-98-1
CMF C9 H14 N4



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 16919-18-9
CMF F6 P
CCI CCS



REFERENCE COUNT:	36	THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L38 ANSWER 4 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER:	2003:745229 CAPLUS
DOCUMENT NUMBER:	140:375286
TITLE:	Mononuclear rhodium(I) complexes with chelating N-heterocyclic carbene ligands - catalytic activity for intramolecular hydroamination
AUTHOR(S):	Burling, Suzanne; Field, Leslie D.; Li, Hsiu L.; Messerle, Barbara A.; Turner, Peter
CORPORATE SOURCE:	School of Chemistry, University of Sydney, 2006, Australia
SOURCE:	European Journal of Inorganic Chemistry (2003),

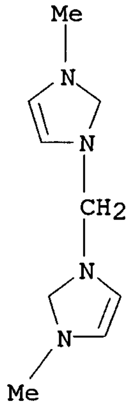
(17), 3179-3184
CODEN: EJICFO; ISSN: 1434-1948
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The mononuclear cationic RhI complexes [Rh(cod)(mdd)]+X- and [Rh(CO)2(mdd)]+X- (X = BPh4, PF6) containing the chelating bidentate N-heterocyclic carbene ligand 1,1'-methylene-3,3'-dimethyldiimidazoline-2,2'-diylidene (mdd) were synthesized and spectroscopically characterized. [Rh(cod)(mdd)]+BPh4- and [Rh(CO)2(mdd)]+PF6- also were characterized by x-ray crystallog. The dicarbonyl complexes catalyze the intramol. hydroamination of 4-pentyn-1-amine to 2-methyl-1-pyrroline.

IT **433231-08-4P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation, structure, and intramol. hydroamination catalytic activity of cationic rhodium(I) N-heterocyclic carbene complexes)
RN 433231-08-4 CAPLUS
CN 1H-Imidazolium, 1,1'-methylenebis[3-methyl-, bis[hexafluorophosphate(1-)] (9CI) (CA INDEX NAME)

CM 1

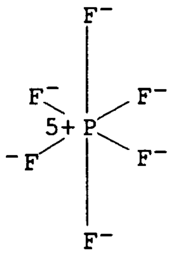
CRN 111127-98-1
CMF C9 H14 N4



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 16919-18-9
CMF F6 P
CCI CCS



```
REFERENCE COUNT:         27    THERE ARE 27 CITED REFERENCES AVAILABLE FOR
                               THIS RECORD. ALL CITATIONS AVAILABLE IN THE
                               RE FORMAT

L38  ANSWER 5 OF 23  CAPLUS  COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER:        2003:274321  CAPLUS
DOCUMENT NUMBER:         140:181554
TITLE:                   Mercury(II) partitioning from aqueous solutions
                         with a new, hydrophobic ethylene-glycol
                         functionalized bis-imidazolium ionic liquid
AUTHOR(S):               Holbrey, John D.; Visser, Ann E.; Spear, Scott K.;
                         Reichert, W. Matthew; Swatloski, Richard P.;
                         Broker, Grant A.; Rogers, Robin D.
CORPORATE SOURCE:        Center for Green Manufacturing and Dept. of
                         Chemistry, Univ. of Alabama, Tuscaloosa, AL,
                         35487, USA
SOURCE:                  Green Chemistry (2003), 5(2), 129-135
                         CODEN: GRCHFJ; ISSN: 1463-9262
PUBLISHER:               Royal Society of Chemistry
DOCUMENT TYPE:           Journal
LANGUAGE:                English
OTHER SOURCE(S):         CASREACT 140:181554
AB   A room temperature ionic liquid containing a bis-imidazolium cation
incorporating
     a short ethylene-glycol spacer, 1,1'-[1,2-ethanediylbis(oxy-1,2-
     ethanediyl)] bis[3-methyl-1H-imidazolium-1-
     yl]bis(trifluoromethanesulfonyl)imide, has been prepared from the
     corresponding chloride salt, and the x-ray crystal structure of the
     low-melting hexafluorophosphate salt has been determined  The crystal
     structure reveals the ether linkage to be quite flexible and to
     participate in strong C2-H···O hydrogen bonds
     leading to asymmetry.  The crystal structure of the bis-imidazolium
     salt incorporating a decyl-spacer, 1,1'-[1,10-decyl]bis[3-methyl-1H-
     imidazolium-1-yl] hexafluorophosphate, has also been determined and
     displays an all-trans (sym.) conformation except at the beta carbon
     positions where a characteristic kink is observed  Introducing the
     ethylene-glycol functionality dramatically increases the distribution
     ratio of mercury ions, but not cesium, from aqueous solution to the
     hydrophobic ionic liquid, and from basic solution  This is the first
     example of pH dependent partitioning and stripping of mercury from
     ionic liquid/aqueous two-phase systems.  The crystal structure of the
     related mercury(ii) carbene complex, obtained from the reaction of
     mercury(ii) acetate with 1,1'-[oxybis(2,1-ethanediyloxy-2,1-
     ethanediyl)]bis[3-methyl-1H-imidazolium-1-yl]tosylate, containing a
     three-ether spacer, in acetonitrile, reveals the possibility of a
     carbene extraction mechanism.
IT   320749-76-6P
```

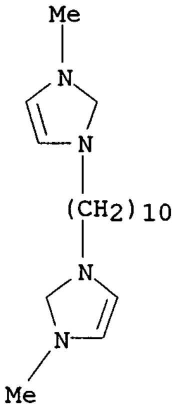
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(crystal structure; mercury partitioning from aqueous solns. with new, hydrophobic ethylene-glycol functionalized bis-imidazolium ionic liquid and crystal structure of mercury carbene complex)

RN 320749-76-6 CAPLUS

CN 1H-Imidazolium, 1,1'-(1,10-decanediyl)bis[3-methyl-, bis[hexafluorophosphate(1-)] (9CI) (CA INDEX NAME)

CM 1

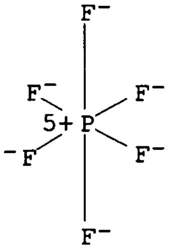
CRN 320749-74-4
CMF C18 H32 N4



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 16919-18-9
CMF F6 P
CCI CCS



REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L38 ANSWER 6 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:902343 CAPLUS
DOCUMENT NUMBER: 138:89445
TITLE: An Acid-Base Switchable [2]Rotaxane
AUTHOR(S): Elizarov, Arkadij M.; Chiu, Sheng-Hsien; Stoddart,

J. Fraser

CORPORATE SOURCE: Department of Chemistry and Biochemistry, University of California, Los Angeles, CA, 90095, USA

SOURCE: Journal of Organic Chemistry (2002), 67(26), 9175-9181

CODEN: JOCEAH; ISSN: 0022-3263

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 138:89445

AB A chemical addressable, bistable [2]rotaxane, which incorporates a dumbbell-shaped component containing both secondary dialkylammonium and 1,2-bis(pyridinium)ethane recognition sites for its ring component, dibenzo[24]crown-8 (DB24C8), has been assembled. 1H NMR spectroscopy has demonstrated that deprotonation (and reprotonation) of the secondary dialkylammonium (dialkylamine) recognition site induces the DB24C8 ring to move away from this site to the 1,2-bis(pyridinium)ethane one (and back again) in a discrete manner, particularly when the experiment is performed in CDCl3 solution

IT **484690-67-7P 484690-69-9P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(intermediate; 1H NMR spectroscopy study of acid-base switchable rotaxane)

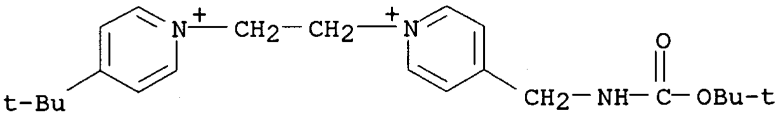
RN 484690-67-7 CAPLUS

CN Pyridinium, 4-[[[(1,1-dimethylethoxy)carbonyl]amino]methyl]-1-[2-[4-(1,1-dimethylethyl)pyridinio]ethyl]-, bis[hexafluorophosphate(1-)] (9CI) (CA INDEX NAME)

CM 1

CRN 484690-66-6

CMF C22 H33 N3 O2

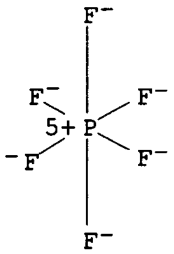


CM 2

CRN 16919-18-9

CMF F6 P

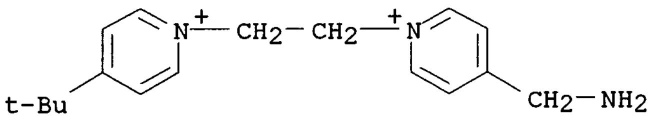
CCI CCS



RN 484690-69-9 CAPLUS
CN Pyridinium, 4-(aminomethyl)-1-[2-[4-(1,1-dimethylethyl)pyridinio]ethyl]-, bis[hexafluorophosphate(1-)] (9CI) (CA INDEX NAME)

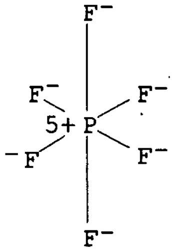
CM 1

CRN 484690-68-8
CMF C17 H25 N3



CM 2

CRN 16919-18-9
CMF F6 P
CCI CCS



REFERENCE COUNT: 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L38 ANSWER 7 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:808618 CAPLUS
DOCUMENT NUMBER: 138:238268
TITLE: Counter-ion effects switch ligand binding from C-2 to C-5 in kinetic carbenes formed from an imidazolium salt and IrH5(PPh3)2
AUTHOR(S): Kovacevic, Anes; Gruendemann, Stephan; Miecznikowski, John R.; Clot, Eric; Eisenstein,

Odile; Crabtree, Robert H.
CORPORATE SOURCE: Department of Chemistry, 225 Prospect Street, Yale University, New Haven, USA
SOURCE: Chemical Communications (Cambridge, United Kingdom) (2002), (21), 2580-2581
CODEN: CHCOFS; ISSN: 1359-7345
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 138:238268

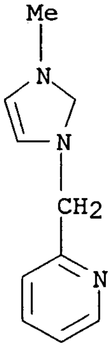
AB Changing the counter-anion in 2-pyridylmethyl imidazolium salts (Br, BF4, PF6, SbF6) causes their kinetic reaction products with IrH5(PPh3)2 to be switched from normal C-2 to abnormal C-5 binding.

IT **501926-28-9**
RL: RCT (Reactant); RACT (Reactant or reagent)
(counter-ion effects switch ligand binding in kinetic carbenes formed from pyridylmethyl imidazolium salt and iridium hydride phosphine complex)

RN 501926-28-9 CAPLUS
CN 1H-Imidazolium, 1-methyl-3-(2-pyridinylmethyl)-, hexafluorophosphate(1-) (9CI) (CA INDEX NAME)

CM 1

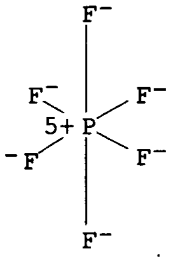
CRN 468081-92-7
CMF C10 H12 N3



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 16919-18-9
CMF F6 P
CCI CCS

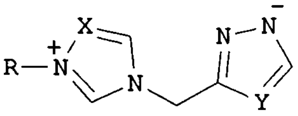


REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L38 ANSWER 8 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER:	2002:646535 CAPLUS
DOCUMENT NUMBER:	138:170143
TITLE:	Heterocyclic betaines, 48. Selection of betaine building blocks for the construction of quadrupolar heterophane frameworks
AUTHOR(S):	Perez-Garcia, Lluisa; Mesquida, Neus; Alemany, Montserrat; Fernandez, Irene; Vilaseca, Marta; Alcalde, Ermitas
CORPORATE SOURCE:	Laboratori de Quimica Organica, Facultat de Farmacia, Universitat de Barcelona, Barcelona, 08028, Spain
SOURCE:	European Journal of Organic Chemistry (2002), (16), 2691-2698 CODEN: EJOCFK; ISSN: 1434-193X
PUBLISHER:	Wiley-VCH Verlag GmbH
DOCUMENT TYPE:	Journal
LANGUAGE:	English
OTHER SOURCE(S):	CASREACT 138:170143

GI



I

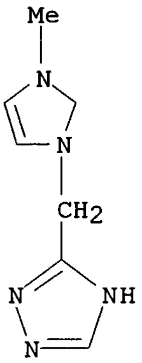
AB A set of [(azolio)methyl]azolate betaines, e.g. I (X, Y = N, CH; R = Me, Bu, PhCH2), designed by combination of a variety of heterocyclic fragments based on pyrazole, 1,2,4-triazole, and benzimidazole, was synthesized from the corresponding azolium salts. The dipolar nature of these betaines was discussed on the basis of 1H and 13C NMR spectroscopic data and dipole moment values, which range between 13.4 and 16.5 D. By exploitation of the sensitivity of electrospray ionization mass spectrometry in both the pos. and neg. modes, several informative peaks and stable noncovalent self-assembled structures in the gas phase were observed From these results, the [(imidazolio)methyl]-1,2,4-triazolate betaine subunits I (X = CH, Y = N) were chosen as the most suitable building blocks for the construction of quadrupolar [1n]heterophanes.

IT **497074-29-0P**

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and properties of [(azolio)methyl]azolate betaines and
[(azolio)methyl]azolium salts)
RN 497074-29-0 CAPLUS
CN 1H-Imidazolium, 1-methyl-3-(1H-1,2,4-triazol-3-ylmethyl)-,
hexafluorophosphate(1-) (9CI) (CA INDEX NAME)

CM 1

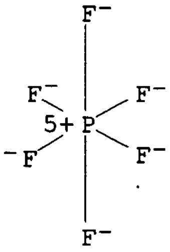
CRN 497074-28-9
CMF C7 H10 N5



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 16919-18-9
CMF F6 P
CCI CCS



REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR
THIS RECORD. ALL CITATIONS AVAILABLE IN THE
RE FORMAT

L38 ANSWER 9 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:527062 CAPLUS
DOCUMENT NUMBER: 138:24799
TITLE: Structural diversity of N-heterocyclic carbene
complexes of silver(I)
AUTHOR(S): Lee, Kwang Ming; Wang, Harrison M. J.; Lin, Ivan
J. B.

CORPORATE SOURCE: Department of Chemistry, Fu-Jen Catholic University, Hsinchuang, 24205, Taiwan

SOURCE: Journal of the Chemical Society, Dalton Transactions (2002), (14), 2852-2856
CODEN: JCSDAA; ISSN: 1472-7773
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 138:24799

AB Seven N-heterocyclic carbene complexes of silver(I) have been synthesized, five of which were structurally characterized. Polymeric AgI-carbene complexes with a diverse range of structures are formed through extended AgI-AgI interactions, AgI-bridging halides, AgI-bridging dicarbenes, and ring π-π interactions. Compds. having extended AgI-AgI-centered interactions exhibit low energy emission bands at λmax $\approx$ 540 nm. These bands are assigned to metal-centered transitions involving extended AgI-AgI interactions.

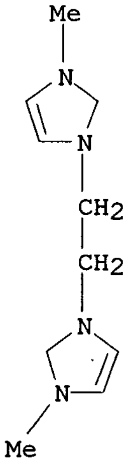
IT **320610-46-6**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with silver salts in preparation of heterocyclic carbene silver complex)

RN 320610-46-6 CAPLUS

CN 1H-Imidazolium, 1,1'-(1,2-ethanediyl)bis[3-methyl-, bis[hexafluorophosphate(1-)] (9CI) (CA INDEX NAME)

CM 1

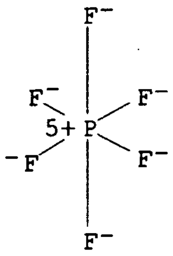
CRN 139694-68-1
CMF $C_{10}H_{16}N_4$



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 16919-18-9
CMF F_6P
CCI CCS



REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L38 ANSWER 10 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:259512 CAPLUS
DOCUMENT NUMBER: 137:5761
TITLE: A Study of the Ionic Liquid Mediated Microwave Heating of Organic Solvents
AUTHOR(S): Leadbeater, Nicholas E.; Torenius, Hanna M.
CORPORATE SOURCE: Department of Chemistry, King's College London, Strand, London, WC2R 2LS, UK
SOURCE: Journal of Organic Chemistry (2002), 67(9), 3145-3148
CODEN: JOCEAH; ISSN: 0022-3263
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 137:5761

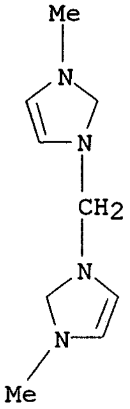
AB The use of ionic liqs. as aids for microwave heating of nonpolar solvents has been investigated. We show that hexane and toluene together with solvents such as THF and dioxane can be heated way above their b.p. in sealed vessels using a small quantity of an ionic liquid, thereby allowing them to be used as media for microwave-assisted chemical Using the appropriate ionic liquid, the heating can be performed with no contamination of the solvent. To show the applicability of the system, two test reactions have been successfully performed.

IT **433231-08-4P**
RL: NUU (Other use, unclassified); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(ionic liquid mediated microwave heating of organic solvents)

RN 433231-08-4 CAPLUS
CN 1H-Imidazolium, 1,1'-methylenebis[3-methyl-, bis[hexafluorophosphate(1-)] (9CI) (CA INDEX NAME)

CM 1

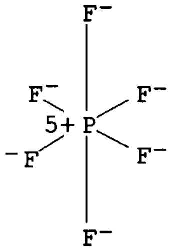
CRN 111127-98-1
CMF C9 H14 N4



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 16919-18-9
CMF F6 P
CCI CCS



REFERENCE COUNT:	44	THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L38 ANSWER 11 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER:	2001:694114 CAPLUS
DOCUMENT NUMBER:	136:63078
TITLE:	Novel silver(I)-organic coordination polymers: conversion of extended structures in the solid state as driven by argentophilic interactions
AUTHOR(S):	Pan, Long; Woodlock, E. Brice; Wang, Xiaotai; Lam, Kin-Chung; Rheingold, Arnold L.
CORPORATE SOURCE:	Department of Chemistry, University of Colorado at Denver, Denver, CO, 80217-3364, USA
SOURCE:	Chemical Communications (Cambridge, United Kingdom) (2001), (18), 1762-1763 CODEN: CHCOFS; ISSN: 1359-7345
PUBLISHER:	Royal Society of Chemistry
DOCUMENT TYPE:	Journal
LANGUAGE:	English
OTHER SOURCE(S):	CASREACT 136:63078

AB Structurally distinct coordination polymers [Ag(bpp)]ClO4 (1) and

[Ag(bpp)]PF6 (2) [bpp = 1,3-bis(4-pyridyl)propane] were assembled. The conversion of 1 into 2 on treatment with NaPF is driven by argentophilic interactions and is the 1st such transformation reported for Ag(I)-organic coordination polymers.

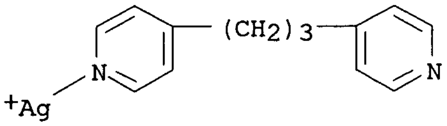
IT **383179-51-9P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and crystal structure and supramol. structure stabilization by silver-silver bonds of polymeric)

RN 383179-51-9 CAPLUS

CN Silver(1+), [4-[3-(4-pyridinyl)propyl]pyridine-κN]-, hexafluorophosphate(1-) (9CI) (CA INDEX NAME)

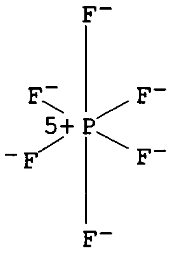
CM 1

CRN 193614-72-1
CMF C13 H14 Ag N2
CCI CCS



CM 2

CRN 16919-18-9
CMF F6 P
CCI CCS

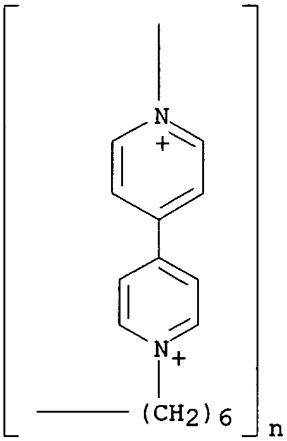


REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

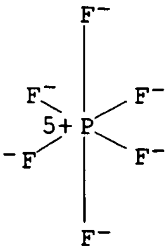
L38 ANSWER 12 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER:	2001:498914 CAPLUS
DOCUMENT NUMBER:	135:288486
TITLE:	The charge-transfer complexation of tetrathiafulvalene with paraquat and its oligomeric derivatives
AUTHOR(S):	Cooke, G.; Augier de Cremiers, H.; Duclairoir, F. M. A.; Gray, M.; Vaqueiro, P.; Powell, A. V.; Rosair, G.; Rotello, V. M.
CORPORATE SOURCE:	Department of Chemistry, Heriot-Watt University, Riccarton, Edinburgh, EH14 4AS, UK

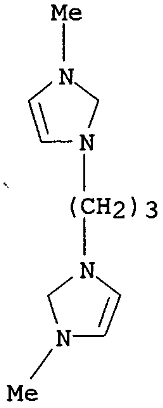
```
SOURCE:                  Tetrahedron Letters (2001), 42(30), 5089-5091
                         CODEN: TELEAY; ISSN: 0040-4039
PUBLISHER:               Elsevier Science Ltd.
DOCUMENT TYPE:           Journal
LANGUAGE:                English
AB   The charge-transfer complexation of TTF with paraquat and its
     oligomeric derivs. are described.
IT   365232-11-7P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
     RACT (Reactant or reagent)
        (charge-transfer complexation; charge-transfer complexation of
        tetrathiafulvalene with paraquat and its oligomeric derivs.)
RN   365232-11-7  CAPLUS
CN   Poly[[4,4'-bipyridinium]-1,1'-diyl-1,6-hexanediyl
     bis[hexafluorophosphate(1-)]] (9CI)  (CA INDEX NAME)

     CM   1

     CRN  69860-18-0
     CMF  (C16 H20 N2)n
     CCI  PMS
```



```
     CM   2

     CRN  16919-18-9
     CMF  F6 P
     CCI  CCS
```



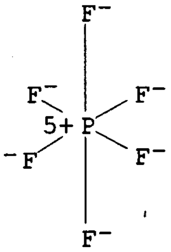
```
REFERENCE COUNT:          17     THERE ARE 17 CITED REFERENCES AVAILABLE FOR
                                 THIS RECORD. ALL CITATIONS AVAILABLE IN THE
                                 RE FORMAT

L38  ANSWER 13 OF 23  CAPLUS  COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER:         2001:50627  CAPLUS
DOCUMENT NUMBER:          134:115955
TITLE:                    Preparation of cyclic delocalized cations
                          connected by spacer groups
INVENTOR(S):              McEwen, Alan B.
PATENT ASSIGNEE(S):       Covalent Associates, Inc., USA
SOURCE:                   PCT Int. Appl., 27 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.          KIND   DATE       APPLICATION NO.         DATE
     ---------------     ----   --------   ---------------------   --------
     WO 2001004097        A2    20010118   WO 2000-US18701         20000707
     WO 2001004097        A3    20010726
         W:  DE, JP
         RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC,
             NL, PT, SE
     US 6531241           B1    20030311   US 2000-611787          20000707
     GB 2353997           A1    20010314   GB 2000-16948           20000710
     GB 2353997           B2    20040421
     FR 2798383           A1    20010316   FR 2000-8992            20000710
PRIORITY APPLN. INFO.:                     US 1999-142726P     P   19990708

OTHER SOURCE(S):          MARPAT 134:115955
AB   Title cations (I) joined together by (un)saturated spacer groups which may
     be organic or inorg., with anions of equal number to cations to maintain
     charge neutrality, were prepared  These materials are well suited for
     use as electrolytes, lubricants, solvents for extns. and for running
     reactions, biphase catalysis media, media for electroluminescent and
     electrochromic devices.  Thus, 1,2-bis(3-methylimidazolium) dibromide
     was prepared  Data for properties of I were given.
IT   320749-62-0P 320749-70-0P 320749-76-6P
     RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
        (preparation of cyclic delocalized cations connected by spacer groups)
RN   320749-62-0  CAPLUS
CN   1H-Imidazolium, 1,1'-(1,3-propanediyl)bis[3-methyl-,
     bis[hexafluorophosphate(1-)] (9CI)  (CA INDEX NAME)

     CM   1

     CRN  320749-60-8
     CMF  C11 H18 N4
```



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

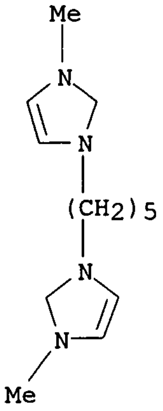
CRN 16919-18-9
CMF F6 P
CCI CCS



RN 320749-70-0 CAPLUS
CN 1H-Imidazolium, 1,1'-(1,5-pentanediyl)bis[3-methyl-, bis[hexafluorophosphate(1-)] (9CI) (CA INDEX NAME)

CM 1

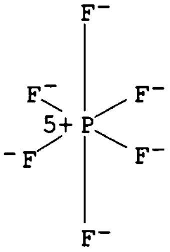
CRN 320749-65-3
CMF C13 H22 N4



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

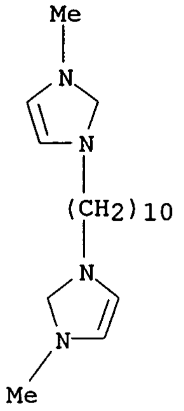
CRN 16919-18-9
CMF F6 P
CCI CCS



RN 320749-76-6 CAPLUS
CN 1H-Imidazolium, 1,1'-(1,10-decanediyl)bis[3-methyl-, bis[hexafluorophosphate(1-)] (9CI) (CA INDEX NAME)

CM 1

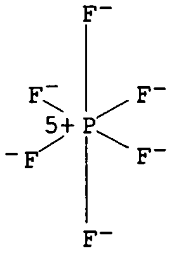
CRN 320749-74-4
CMF C18 H32 N4



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 16919-18-9
CMF F6 P
CCI CCS

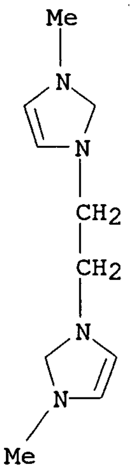


L38 ANSWER 14 OF 23 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:46265 CAPLUS
DOCUMENT NUMBER: 134:118340
TITLE: Ionic conductors and secondary lithium ion batteries using them
INVENTOR(S): Tsuchiya, Shuji; Nanai, Satonari
PATENT ASSIGNEE(S): Matsushita Electric Industrial Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

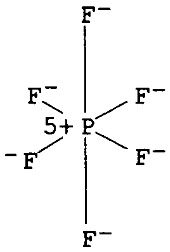
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001015166	A2	20010119	JP 1999-187276	19990701
PRIORITY APPLN. INFO.:			JP 1999-187276	19990701

AB Solid or gelled ionic conductors contain (non)ionic polymers, N,N'-disubstituted imidazolium compds. or aromatic group-containing

```
     quaternary ammonium compds., and other cations.  Secondary Li ion
     batteries using electrolyte solns. containing the solid or gelled ionic
     conductors show high ionic conductivity and high capacity.
IT   320610-46-6DP, complexes with metal compds. and polymers
     320610-48-8DP, complexes with metal compds. and polymers
     RL: DEV (Device component use); PNU (Preparation, unclassified); PREP
     (Preparation); USES (Uses)
        (ionic conductors containing (non)ionic polymers, imidazolium compds.
        or quaternary ammonium compds., and other cations for secondary Li
        ion battery electrolytes)
RN   320610-46-6  CAPLUS
CN   1H-Imidazolium, 1,1'-(1,2-ethanediyl)bis[3-methyl-,
     bis[hexafluorophosphate(1-)] (9CI)  (CA INDEX NAME)

     CM   1

     CRN  139694-68-1
     CMF  C10 H16 N4
```

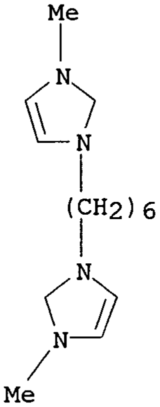


```
ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

     CM   2

     CRN  16919-18-9
     CMF  F6 P
     CCI  CCS
```

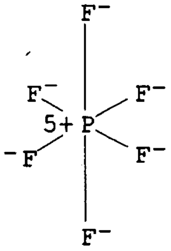


```
RN   320610-48-8  CAPLUS
```

```
CN   1H-Imidazolium, 1,1'-(1,6-hexanediyl)bis[3-methyl-,
     bis[hexafluorophosphate(1-)] (9CI)  (CA INDEX NAME)

     CM   1

     CRN  94567-59-6
     CMF  C14 H24 N4
```



```
ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

     CM   2

     CRN  16919-18-9
     CMF  F6 P
     CCI  CCS
```



```
L38  ANSWER 15 OF 23  CAPLUS  COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER:        2000:787793  CAPLUS
DOCUMENT NUMBER:         133:327884
TITLE:                   Oxythiamine hexafluorophosphate monohydrate, a
                         thiamine antagonist with the same conformation as
                         thiamine
AUTHOR(S):               Hu, Ning-Hai; Kiyota, Yasuhiro; Aoki, Katsuyuki
CORPORATE SOURCE:        Changchun Institute of Applied Chemistry, Chinese
                         Academy of Sciences, Changchun, 130022, Peop. Rep.
                         China
SOURCE:                  Acta Crystallographica, Section C: Crystal
                         Structure Communications (2000), C56(10),
                         1284-1286
```